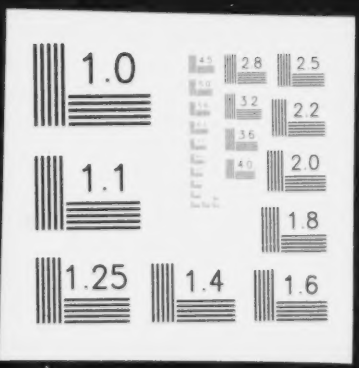
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# Debt Management Report

2002-2003

Canada

# Debt Management Report

2002-2003

Department of Finance Canada
Ministère des Finances Canada

104-02826/

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# Table of Contents


**Foreword by the Minister of Finance** ..... 5

**Purpose of this Publication** ..... 7

**Highlights of the 2002–2003 Debt Strategy** ..... 9

**Part I: Debt Management Context** ..... 16

The Fiscal Environment ..... 16

Composition of the Federal Debt ..... 21

Composition of the Market Debt ..... 23

Domestic Debt Programs ..... 23

Foreign Currency Debt Programs ..... 27

**Part II: Report on the 2002–2003 Debt Strategy** ..... 28

A Well-Functioning Government of Canada Securities Market ..... 28

Managing Treasury Risk ..... 35

**Part III: Debt, Cash and Reserves Management Indicators** ..... 41

Domestic Debt and Government of Canada Securities Market ..... 41

Trading Volume by Market Participants ..... 50

Domestic Holdings of Government of Canada Debt ..... 52

Canadian-Dollar Cash Balances ..... 53

Funding and Investment of Reserves ..... 54

**Annex 1—Managing the Debt Structure** ..... 56

**Annex 2—Glossary** ..... 65

**Annex 3—Contact Information** ..... 68

**Reference Tables** ..... 69

## Foreword by the Minister of Finance

I am pleased to table before Parliament the Government of Canada's *Debt Management Report* for fiscal year 2002–03. It provides the accountability Canadians deserve, with comprehensive information about how Canada's debt is managed.

During the past fiscal year the Government of Canada recorded its sixth consecutive budget surplus, a feat not achieved in half a century. According to the Organisation for Economic Co-operation and Development (OECD), Canada will be the only G-7 nation in surplus this year. These ongoing surpluses have enabled us to reduce our federal debt by more than $52 billion since we balanced the budget in 1997–98.

Today Canada's debt-to-GDP (gross domestic product) ratio stands at 44.2 per cent compared to its peak of 68.4 per cent in 1995–96. An additional benefit is a $3-billion reduction, every year, in interest service charges. These savings are now being invested in the priorities of Canadians, while enabling us to better withstand the fiscal damage caused by unforeseen events both inside and outside our borders.

Canada has made remarkable fiscal progress. Yet, at 21 cents of every revenue dollar received by the Government, interest charges remain the largest single expense in our budget. Obviously, we must continue to reduce this debt obligation even further. This government will not waver from its commitment to manage the nation's finances prudently and in the long-term interest of its citizens.

Sound financial management is an integral part of our strategy to create the economic conditions of a better standard of living and a better quality of life, conditions that will allow Canadians to excel. It is an obligation that we will honour, to build the Canada we want.

The Honourable Ralph Goodale, P.C., M.P.
Minister of Finance
Ottawa, February 2004

## Purpose of this Publication

The *Debt Management Report* provides a detailed account of the Government of Canada's borrowing and cash management operations over the fiscal year from April 1, 2002 to March 31, 2003.

It provides a comprehensive account of the context within which the debt is managed, its composition and changes during the year, and actions taken on strategic initiatives set out in the 2002–03 *Debt Management Strategy*, published in March 2002. A set of reference tables containing statistics on the operation of debt programs is also provided.

The information contained in this report is designed for market participants, to ensure transparency and public accountability in the Government's borrowing and cash management activities. The *Debt Management Strategy* and the *Debt Management Report* are tabled annually in Parliament and are available on the Department of Finance Web site at www.fin.gc.ca.

### *Additions to the* Debt Management Report

Two sections have been added to this year's report.

A summary of planned initiatives, their rationale, actions taken and underlying debt strategy themes for the year is found on page 12.

A compilation of debt management indicators related to debt, cash and reserves management activities, which is intended to enhance public understanding and accountability, is found on page 41.

# Highlights of the 2002–2003 Debt Strategy

## Summary

In 2002–03 the Government of Canada continued to reduce its level of indebtedness. On a full accrual basis of accounting, the federal debt was reduced to $510.6 billion, down $52.3 billion from its peak in 1996–97. The 2002–03 budgetary surplus of $7.0 billion was used to reduce interest-bearing debt by $2.1 billion, lower other liabilities by $2.1 billion, and increase financial and non-financial assets by $2.8 billion. Debt-servicing charges were down $2.4 billion from fiscal year 2001–02, as a result of the decline in interest-bearing debt and a 20-basis-point reduction in the average interest rate on that debt. The cumulative reduction in indebtedness since 1996–97 has reduced debt charges by $3 billion, on average, each year. Lower debt-servicing charges benefit Canadian taxpayers.

The advent of a period of federal budgetary surpluses in the 1990s ushered in a new area in federal debt management—one focused on maintaining a well-functioning market for debt, or fixed-income securities, in an environment of declining borrowing needs. Over the past several years the majority of adjustments to government borrowing programs have been in this domain, and this focus continued in 2002–03.

A key objective of federal debt management is to raise stable, low-cost funding for the Government. To achieve this, the Government has established a framework for managing the debt, which includes principles that guide funding activities (see the box on the next page). In accordance with that framework, the Government lays out its annual plan for managing the outstanding stock of debt in the *Debt Management Strategy* publication prior to each fiscal year. Plans for the management of government cash balances and foreign exchange reserves are also included in the publication. The debt strategy for fiscal year 2002–03 was tabled in Parliament and published by the Department of Finance in March 2002 (www.fin.gc.ca/toce/2002/dms02_e.html).

This document, the *Debt Management Report*, reports on government debt, cash and reserves operations that occurred over the 2002–03 fiscal year and provides detailed information on the composition of the outstanding debt. Following the Government of Canada's shift to full accrual accounting, this report clarifies certain terms used to describe the debt, including "gross public debt," "market debt," "non-market debt," "net public debt," and "federal debt" or "accumulated deficit."

By highlighting the progress of plans and initiatives set out in the debt strategy, this report is of use to market participants and ensures public accountability. All of the 2002–03 objectives for the management of the Government of Canada's debt, cash and reserves were achieved over the course of the year. In addition, complementary initiatives were identified and acted upon based on consultations with market participants. The objectives and actions taken in 2002–03 are reviewed in more detail in the table on page 12.

New to the report this year is a section on the key themes underlying the debt strategy in 2002–03. The two key themes are supporting a well-functioning Government of Canada securities market and managing risk.

A **well-functioning wholesale market in Government of Canada securities** benefits the Government as well as a wide range of market participants. For the Government as a debt issuer, a well-functioning market attracts investors and ensures that funding costs are kept low. For market participants, a liquid and active secondary market in government debt provides credit-risk-free assets for investment portfolios, a pricing benchmark for other debt issues and swaps, and a primary tool for hedging risk.

### *Debt Strategy Framework*

#### *Fundamental Objective:*

Raise stable, low-cost funding for the Government of Canada.

#### *Strategic Objectives:*

Maintain a prudent debt structure.

Maintain and enhance a well-functioning market for Government of Canada securities.

Maintain a diversified investor base.

#### *Operational Principles:*

**Prudence:** The structure of the federal debt is managed to protect the Government's fiscal position from unexpected increases in interest rates and to limit refinancing needs. All funding for domestic operational needs is raised in Canadian dollars, while risks arising in the management of the foreign reserves are immunized by matching as closely as possible the currency and duration of assets and liabilities.

**Transparency, liquidity and regularity:** The design and implementation of funding and investment programs is based on these principles to attract broad investor interest and thereby lower costs.

**Diversification:** A variety of sources of funds and borrowing maturities are used to take advantage of the range of investor types and demand.

**Market integrity:** The Government works with market participants and regulators to maintain high standards of conduct to ensure the attractiveness to investors of the Government of Canada securities market.

**Consultation:** Input from market participants is sought before major adjustments are made to federal debt and cash management programs to limit the risk of market disruption.

**Best practices:** Operational frameworks and practices are based on the best practices of other comparable sovereign borrowers and relevant practices in the private sector.

The Government's efforts to maintain and enhance the market for its securities have targeted both the issuance of bonds and Treasury bills through auctions, and the liquidity and efficiency of the secondary market. Program initiatives of note in recent years include increasing the target sizes for benchmark 2-, 5-, 10- and 30-year bonds and the size of new bond issues, and implementing bond buybacks. The Department of Finance and the Bank of Canada have also worked with market participants and securities regulators to develop a framework to enhance the transparency and integrity of the fixed-income market. In 2002–03 these areas continued to be the primary focus of government initiatives.

The debt, cash and reserves management operations of the Government of Canada engender exposure to various forms of financial risk. The primary focus of **risk management** in the context of federal debt strategy has always been the management of the structure of the domestic debt, which, due to the impact of changing interest rates, is by far the most significant form of financial risk to which the Government is exposed.

In recent years, in addition to focusing on the maintenance of a prudent debt structure, the Government has introduced a comprehensive risk management framework for identifying and managing all forms of treasury risk, in particular the market, credit, operational and legal risks related to the financing and investment of its foreign exchange reserves and the investment of its Canadian-dollar cash balances.

The Government's risk management policies, supported by the creation of a special risk unit at the Bank of Canada, call for prudent management of treasury risks based on best practices. Risk tolerances are low, calling for market risk to be immunized to the greatest extent possible and the maintenance of high credit quality and portfolio diversification standards.

Also new to this year's report is a section describing commonly used indicators of a well-functioning securities market. These include the degree to which auctions in the primary market are well bid and the level of liquidity and trading in the secondary market. While there are a number of factors that affect these indicators, debt managers follow these measures when examining the Government's debt management activities.

Finally, an annex to the report describes the analytical tools and considerations that the Government uses to determine its target debt structure. One of the key indicators characterizing the composition of the debt is how much of the debt structure is exposed to interest rate variations. The annex describes the techniques the Government uses to analyze the exposure of the debt structure to fluctuations in interest rates, as well as its decision in the 2003 budget to lower the fixed-rate share target of the debt from two-thirds to 60 per cent over a five-year period.

**Debt Strategy Plan and Actions Taken**

| | Plan (including initiatives identified through mid-year consultations) | Purpose | Actions Taken |
|---|---|---|---|
| **Debt Structure** | Maintain two-thirds of total interest-bearing debt in fixed-rate form. | Keep debt costs low and stable. | The fixed ratio was maintained within a band of 3 per cent around the 2/3 target. |
| **Domestic Debt Programs** | Maintain bond and Treasury bill program sizes in line with the prior year. | Provide liquidity to maintain a well-functioning market. | The gross bond program and stock of Treasury bills were roughly in line with the prior year. |
| | Maintain 2-, 5-, 10- and 30-year benchmark bond issue sizes. | Provide liquidity to maintain a well-functioning market. | Benchmark bond issue sizes were maintained, with the exception of a 2-year issue (see below). |
| | Limit the total amount of bonds maturing on any maturity date. | Maintain a balanced debt maturity structure. | The September 2002 2-year auction was reduced by $500 million compared to prior 2-year bond issues, as it was fungible with an existing large outstanding bond. |
| | Expand the basket of bonds eligible for buyback operations. | Promote participation in buybacks and sustain the size of new bond issues in the context of declining borrowing needs. | The basket was expanded to include some old benchmark bonds and their fungibles. |
| | Continue and increase the size of the pilot program of buybacks on a switch basis. | Promote participation in buybacks and sustain the size of new bond issues. | Switch buybacks were expanded to all maturities (2-, 5-, 10- and 30-year sectors) and the program increased in size from $400 million to $5.9 billion. |

**Debt Strategy Plan and Actions Taken** *(cont'd)*

| | Plan (including initiatives identified through mid-year consultations) | Purpose | Actions Taken |
|---|---|---|---|
| **Domestic Debt Programs** *(cont'd)* | Reduce the targeted turnaround time for publication of the results of Government of Canada securities operations. | Reduce market risk for participants and encourage broader participation in auctions. | On November 25, 2002, turnaround times were reduced from 15 minutes to 10 minutes for auctions and from 30 minutes to 15 minutes for buyback operations. |
| | Adjust the timing of buyback operations. | Reduce market risk for participants, accommodate participants' preferences and encourage broader participation. | On November 25, 2002, the time of regular bond buyback operations was changed from 1:15 p.m. to 1:00 p.m.<br><br>On September 25, 2002, the time of switch operations was changed from 12:30 p.m. to 10:30 a.m. |
| | Establish a lower limit on the buyback of older benchmarks. | Ensure liquidity is maintained in actively traded outstanding bonds. | Repurchases of older benchmarks are now stopped when the remaining outstanding amount for each maturity reaches $6 billion. |
| **Cash Management** | Continue and expand the pilot Cash Management Bond Buyback program. | Reduce the peak levels of government cash balances and reduce variability in Treasury bill auctions. | Operations were held regularly throughout the year and offers to repurchase maturing bonds were extended to include those maturing in up to 18 months. |
| | Implement a new framework for the management of cash balances. | Reduce the risk of counterparty failure and broaden access. | In September 2002 the new collateral-based framework was successfully launched. |

**Debt Strategy Plan and Actions Taken** *(cont'd)*

| | Plan (including initiatives identified through mid-year consultations) | Purpose | Actions Taken |
|---|---|---|---|
| **Reserves Management** | Maintain a prudent level of international reserves, in line with comparable sovereigns. | Provide a source of foreign currency liquidity and promote orderly conditions in the foreign exchange market for the Canadian dollar. | International reserves increased by US$1.9 billion to US$35.9 billion as at March 31, 2003, largely due to changes in market values. |
| | Implement a collateral management framework for swap credit exposures. | Limit the risk of loss arising from the downgrade or failure of a swap counterparty. | The collateral management framework was implemented in April 2002. |
| | Develop and implement a US-dollar repo program. | Reduce the amount of uncollateralized commercial deposits. | The repo program was developed in 2002 and inaugurated in April 2003. |
| | Close the gap between foreign currency assets and liabilities. | Immunize against currency and interest risks. | In 2002 the Government continued its efforts to close the gap, which was closed in 2003. |
| | Review the investment guidelines governing the management of reserves. | Further diversify Exchange Fund Account investments and bring the guidelines in line with investment practices of a number of other OECD sovereigns. | In the fall of 2002 the Government amended its guidelines to allow a limited amount of securities of A-rated sovereigns to be held within prudent limits. |
| | Review the credit guidelines pertaining to financial institution counterparties for the management of reserves. | Further diversify credit risk across financial institution counterparties. | The credit risk guidelines were modified in 2002 to accept A-rated financial institutions as eligible counterparties for swaps, forwards and deposits. |

**Debt Strategy Plan and Actions Taken** *(cont'd)*

| | Plan (including initiatives identified through mid-year consultations) | Purpose | Actions Taken |
|---|---|---|---|
| **Reserves Management** *(cont'd)* | Publicly disclose the investment and credit guidelines. | Increase the transparency of the Government's investment and credit guidelines governing the management of reserves. | The guidelines were published in the *2002 Annual Report to Parliament on the Operations of the Exchange Fund Account.*[1] |
| | Renew the US$6-billion standby line of credit with international banks. | Provide a potential source of supplementary liquidity for the Government. The existing standby credit agreement has been in place since June 23, 1978. The facility has not been used since 1986. | The standby credit facility with international banks was successfully renegotiated in 2002. The maturity date was extended from 2003 to 2007. No other changes were made to the terms of the facility. |

[1] Available on the Department of Finance Web site at www.fin.gc.ca.

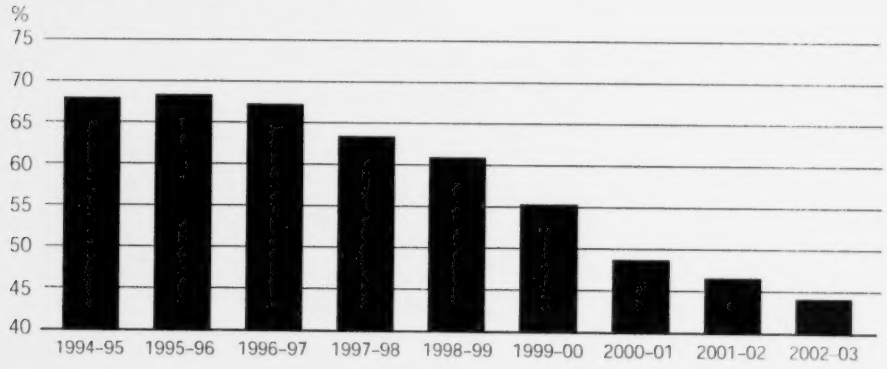
## The Fiscal Environment

### *Budgetary Environment*

Canada has experienced a remarkable turnaround in its fiscal position in recent years: the Government has recorded six consecutive budget surpluses; the federal debt has been reduced by $52.3 billion since 1997–98; the federal debt-to-GDP ratio has fallen almost 25 percentage points from its peak of 68.4 per cent in 1995–96 to 44.2 per cent in 2002–03; and fiscal and monetary policy credibility has contributed to lower interest rates.

In 2002–03 the Government recorded a budgetary surplus of $7.0 billion, and the federal debt-to-GDP ratio declined by 2.5 percentage points. This is the seventh consecutive year in which the debt-to-GDP ratio has declined, and it is at its lowest level since 1984–85 (see Chart 1). For detailed information, see the *Annual Financial Report of the Government of Canada* (fiscal year 2002–03) at www.fin.gc.ca/toce/2003/afr_e.html.

Chart 1
**Federal Debt-to-GDP Ratio**




Source: Department of Finance.

### *Financial Requirement/Source*

The budgetary balance is the most comprehensive measure of the Government of Canada's fiscal results. It is presented on a full accrual basis of accounting, recording government assets and liabilities when they are receivable or incurred, regardless of when the cash is received or paid. In addition, the budgetary balance includes only those activities over which the Government has legislative control.

***Note to Readers***

The financial statements for 2002–03 are presented on the full accrual basis of accounting, which replaces the modified accrual standard that had been used since the mid-1980s. Prior to the shift to full accrual accounting, there was no distinction between net debt and the accumulated deficit, or federal debt, so these terms were used interchangeably.

Under full accrual accounting, this is no longer the case. Net debt is the Government's net liabilities excluding the value of its non-financial assets. Non-financial assets include tangible capital assets, inventories and prepaid expenses. The accumulated deficit takes into account the value of non-financial assets. The two indicators now represent different measures of the Government's financial position. The federal debt will now represent the accumulation of surpluses and deficits in the past and is the key measure of debt.

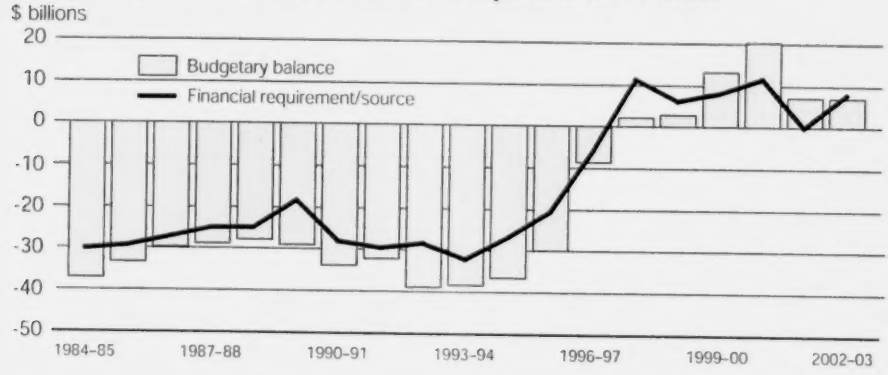
In contrast, the financial requirement/source measures the difference between cash coming in to the Government and cash going out. It differs from the budgetary balance in that it includes transactions in loans, investments and advances, federal employees' pension accounts, other employee and veteran future benefit plans, other specified purpose accounts, foreign exchange activities, changes in other financial assets, liabilities and non-financial assets. These activities are included as part of non-budgetary transactions. The conversion from full accrual to cash accounting is also reflected in non-budgetary transactions.

The budgetary surplus of $7.0 billion and net source of funds from non-budgetary transactions of $0.6 billion produced a financial source of $7.6 billion. This compares to a financial requirement of $0.3 billion in 2001–02 and sources of $11.3 billion in 2000–01 and $7.8 billion in 1999–2000.

In this environment of financial sources, one of the key goals of federal debt management in recent years has been to maintain a liquid and well-functioning market for Government of Canada securities, in particular the domestic Treasury bill and bond programs that form the benchmarks for the Canadian fixed-income market. In 2002–03 both the Treasury bill and bond programs were maintained at levels roughly in line with those of the previous year.

With the shift to full accrual accounting, a number of classification changes have been incorporated, with foreign exchange activities now part of non-budgetary transactions. Consequently, the Government has now recorded a financial source in five of the past six years (see Chart 2). The financial source in 2002–03 was used to increase cash balances by $5.1 billion and to reduce market debt by $2.5 billion.

Chart 2
**Budgetary Balance and Financial Requirement/Source**

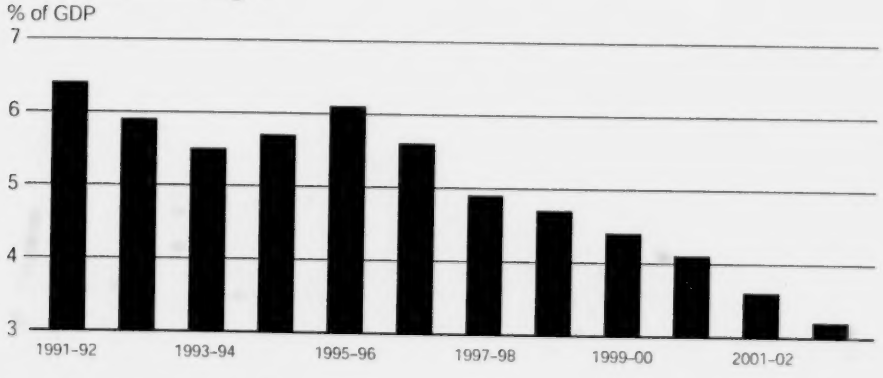



Sources: *Public Accounts of Canada* and Statistics Canada.

### *Public Debt Costs*

In 2002–03 the Government spent 21 cents of every dollar of revenue to pay the interest on the public debt, down from a peak of almost 39 cents in 1990–91. Public debt charges as a percentage of GDP declined to 3.2 per cent in 2002–03 from 3.6 per cent in 2001–02 (see Chart 3).

Chart 3
**Public Debt Charges**




Source: *Public Accounts of Canada*.

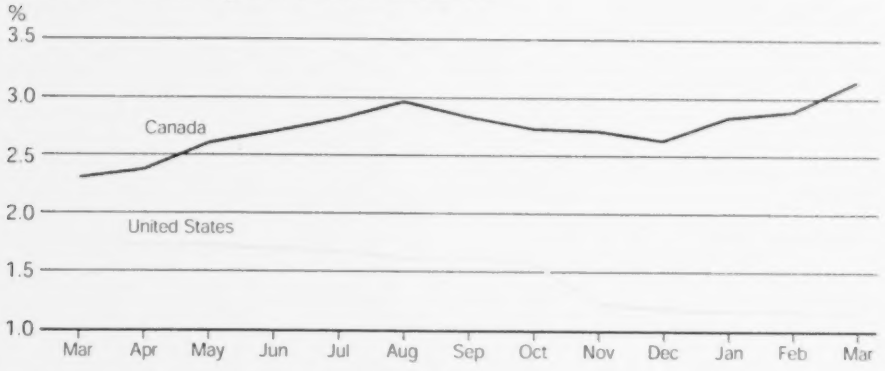
Debt-servicing costs arise from market and non-market debt. Interest rates on market debt are set at the time bonds and Treasury bills are issued and depend on the maturity of the borrowing. The interest rates on interest-bearing non-market debt are based on a 20-year rate imputed from market rates. In 2002–03 the cost of both types of long-term debt benefited from declining long-term interest rate movements over the year (described in the following section) and the decline in

the level of interest-bearing debt. The average interest rate paid on the public debt declined from 6.4 per cent in 2001–02 to 6.2 per cent in 2002–03, while the stock of debt declined by $2.1 billion in 2002–03.

### *Interest Rate Developments in 2002–03*

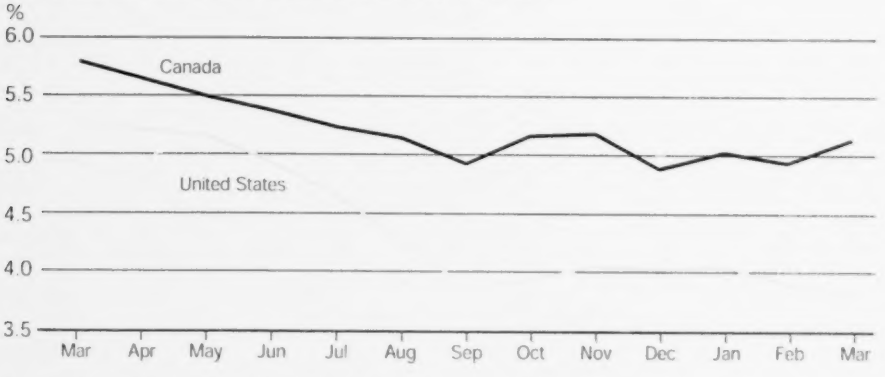
The Bank of Canada tightened monetary policy four times in 2002–03, increasing the overnight rate from 2 to 3 per cent. Three-month Treasury bill yields shifted upwards over the year, from 2.37 to 3.14 per cent (see Chart 4), while longer-term rates fell over the year, from 5.79 to 5.08 per cent (71 basis points) at the 10-year maturity and from 5.98 to 5.55 per cent (43 basis points) at the 30-year maturity (see Charts 5 and 6). Overall, the yield curve flattened at year-end compared to the previous year (see Chart 7).

Chart 4
**3-Month Treasury Bill Rates, 2002–03**




Sources: Bank of Canada and Federal Reserve Board

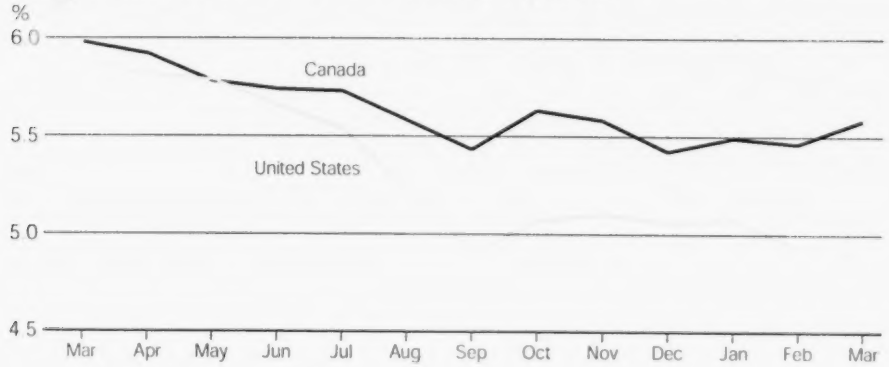
Chart 5
**10-Year Government Bond Rates, 2002–03**




Sources: Bank of Canada and Federal Reserve Board

Chart 6

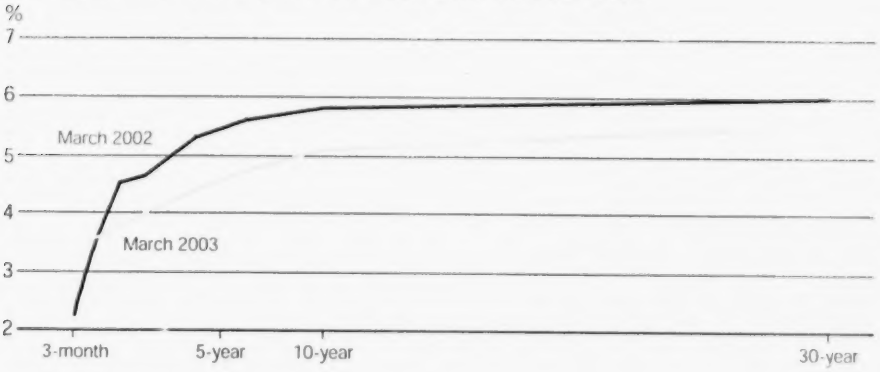
**Long-Term Government Bond Rates, 2002–03**




Sources: Bank of Canada and Federal Reserve Board.

Chart 7

**Canada Yield Curve, March 2002 and March 2003**




Source: Bank of Canada.

## Composition of the Federal Debt

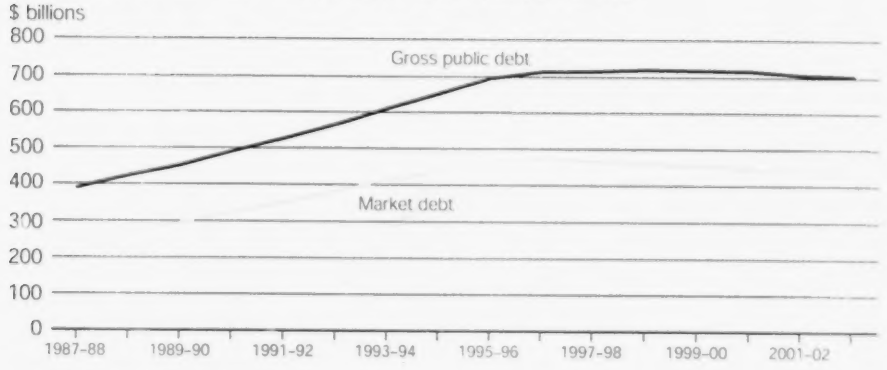
### *Gross Public Debt*

Gross public debt is made up of two major components: market debt and non-market debt. Gross public debt at the end of March 2003 totalled $700.1 billion, down $4.2 billion from the previous year and $17.6 billion from its peak of $717.7 billion on March 31, 1999 (see Chart 8).

### *Market Debt*

Market debt is the portion of gross debt that is funded in the capital markets and strategically managed by the Government. (Foreign currency debt is issued on an opportunistic basis, while Canada Pension Plan [CPP] debt is not funded in markets but is based on market rates.) Market debt consists of marketable bonds, Treasury bills, foreign currency denominated bonds and bills, retail debt and bonds held by the CPP. At March 31, 2003, market debt outstanding was $439.8 billion, down $2.5 billion from the previous year (see Chart 8).

Chart 8
**Evolution of Gross Public Debt and Market Debt**




Source: *Public Accounts of Canada.*

### *Non-Market Debt*

Non-market debt comprises liabilities held by the Government outside capital markets. This includes money owed to public sector pensions, the CPP and employees and veterans for future benefits, as well as other liabilities, accounts payable and accrued liabilities and allowances. In 2002–03 non-market debt amounted to $260.4 billion, down $1.7 billion from 2001–02.

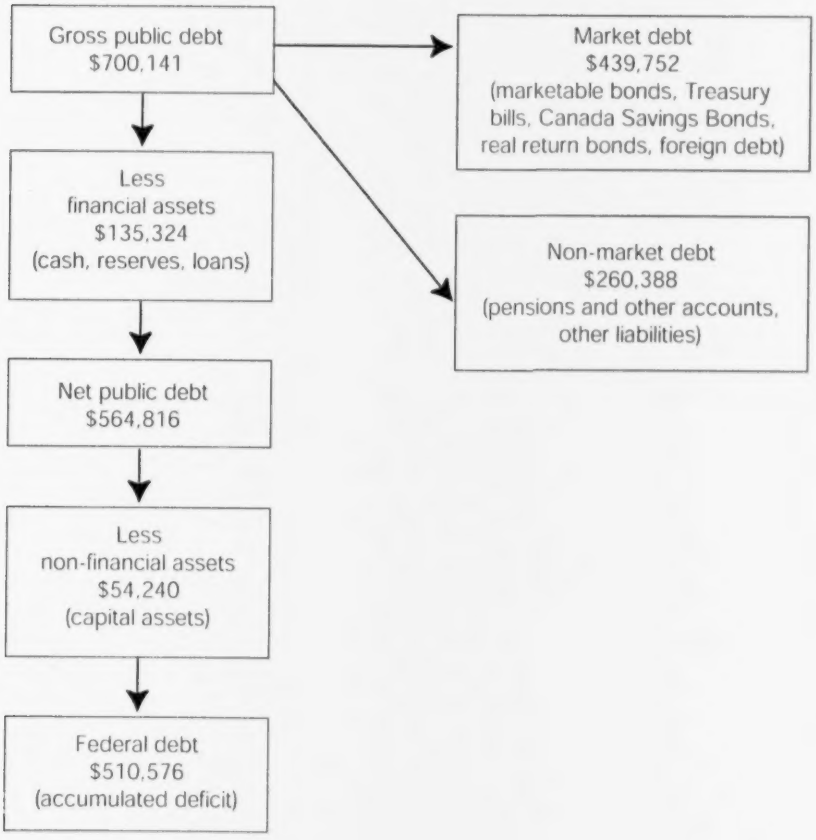
### *Net Public Debt*

Net public debt is gross public debt minus financial assets. Financial assets include cash, foreign exchange accounts and loans. Net public debt declined by $6.1 billion, from $570.9 billion in 2001–02 to $564.8 billion in 2002–03. The Government's financial assets increased by $1.9 billion to $135.3 billion, as the decrease in foreign exchange reserves was more than offset by increases in the Government's cash balances and accounts receivable and in its loans, investments and advances.

### *Federal Debt*

Federal debt, or the accumulated deficit, is net public debt minus non-financial assets. Non-financial assets include tangible capital assets, inventories and prepaid expenses. Federal debt declined by $7.0 billion, from $517.5 billion in 2001–02 to $510.6 billion in 2002–03. The Government's non-financial assets increased by $0.9 billion to $54.2 billion, as an increase in tangible capital assets was offset somewhat by decreases in inventories and prepaid expenses.

**Total Public Debt as at March 31, 2003**
($ millions)




Source: *Public Accounts of Canada*.

## Composition of the Market Debt

The Government of Canada has two types of market debt: domestic debt, which is denominated in Canadian dollars, and foreign currency debt. The Government borrows in Canadian dollars using two types of funding: wholesale and retail. Wholesale funding is conducted through issuance of marketable securities, which include nominal bonds, real return bonds and Treasury bills. These securities are sold via auctions to Government of Canada securities distributors[2] and end-investors. Retail funding is raised through sales of retail bonds to individuals who are Canadian residents.

Funds raised in Canadian dollars are used primarily to meet the Government's operational requirements. See www.fin.gc.ca/invest/debt-e.html for a detailed description of the Government of Canada's market debt instruments. A small proportion of Canadian-dollar wholesale debt is swapped to foreign currencies to fund the Government's foreign exchange reserves. The Government also borrows in foreign currencies for the reserves, which are held in the Exchange Fund Account. The Exchange Fund Account provides a source of foreign currency liquidity and is used to promote orderly conditions in the foreign exchange market for the Canadian dollar. Details on the operations of the Exchange Fund Account can be found in the *2002 Annual Report to Parliament on the Operations of the Exchange Fund Account* at www.fin.gc.ca/toce/2003/efa2002_e.html.

In 2002–03 debt issuance and stock levels (see Table 1) were in accordance with the plans set out in the 2002–03 *Debt Management Strategy* at the beginning of the fiscal year.

## Domestic Debt Programs

### *Fixed-Coupon Marketable Bonds*

As planned, gross bond program issuance was maintained in line with 2001–02: gross issuance totalled $42.3 billion in 2002–03 versus $40 billion in 2001–02. Also as planned, bond buyback programs were conducted on a larger scale than in 2001–02.

The gross issuance of bonds of $42.3 billion consisted of $13.9 billion in 2-year bonds, $11 billion in 5-year bonds, $12.6 billion in 10-year bonds and $4.8 billion in 30-year bonds (see Reference Table IX for more information on bond auctions). The majority of gross issuance, $36.4 billion, was through new bond issuance while a smaller portion, $5.9 billion, was issued through the pilot buyback program on a switch basis.

[2] The names of government securities distributors and primary dealers can be found at www.bankofcanada.ca/en/auct.htm. Details related to the responsibilities and performance requirements of government securities distributors are described in "Terms of Participation in Auctions for Government Securities Distributors."

Bond buyback operations totalled $12.1 billion, consisting of $3.2 billion in 2- and 5-year bonds, $3.3 billion in 10-year bonds, and $2.3 billion in 30-year bonds (see Reference Table XII for more information on buyback operations). The repurchase of old bonds on a cash basis accounted for $7.1 billion of the buyback operations. Under the pilot program of buyback on a switch basis, the Government repurchased $5 billion of old bonds and issued $5.9 billion of new bonds.

During fiscal year 2002–03, $30.3 billion of bonds matured. Net new issuance of fixed-coupon marketable bonds during the year, taking into account buybacks and maturities, declined by $7.9 billion (gross issuance less repurchases and less maturing issues), bringing the stock of outstanding marketable bonds down to $269.1 billion as at March 31, 2003.

**Table 1**
*Change in Composition of Federal Market Debt, 2002–03*

| | April 1, 2002 Outstanding | New issues[a] | Maturing[a] | Repurchase | March 31, 2003 Outstanding[a] | Change |
|---|---|---|---|---|---|---|
| | | | ($ billions) | | | |
| **Domestic debt** | | | | | | |
| Fixed-coupon marketable bonds | 277.0 | 42.3 | 30.3 | 19.9[d] | 269.1 | -7.9 |
| Real return bonds | 16.8 | 2.3 | – | – | 19.1 | 2.3 |
| Treasury bills[b] | 94.0 | 236.8 | 226.4 | | 104.4 | 10.4 |
| Retail debt | 24.0 | 2.7 | 4.1 | – | 22.6 | -1.4 |
| Total domestic debt | 411.8 | | | | 415.2 | 3.4 |
| **Foreign currency debt** | | | | | | |
| Canada bills | 3.4 | 16.6 | 17.3 | – | 2.6 | -0.8 |
| Foreign bonds[c] | 19.3 | 0.4 | 5.7 | – | 14.0 | -5.3 |
| Canada notes | 1.2 | – | 0.0 | – | 1.2 | 0.0 |
| Euro Medium-Term Notes | 3.2 | 0.2 | 0.1 | – | 3.3 | 0.1 |
| Total foreign debt | 27.1 | | | | 21.1 | -6.0 |
| **CPP bonds and notes** | 3.4 | – | 0.0 | – | 3.4 | 0.0 |
| **Total market debt** | 442.3 | | | | 439.8 | -2.5 |

Note: As at March 31, 2003, the total amount of interest rate and cross-currency swaps outstanding stood at USD 20.2 billion (see Reference Table XI). Cross-currency swaps convert C$ denominated government debt into foreign currency obligations for the purpose of funding the international reserves portfolio (see text below).

Numbers may not add due to rounding.

[a] Includes other adjustments such as the Consumer Price Index adjustment and the translation of marketable bonds payable in foreign currencies to Canadian dollars using the closing rates of exchange at March 31, 2003.

[b] These securities are issued at 3-, 6- and 12-month maturities and are therefore rolled over a number of times during the year for refinancing. This results in a larger number of new issues per year than stock outstanding at the end of the fiscal year. These amounts include cash management bills (CMBs); there were no CMBs outstanding at the beginning of fiscal 2002–03, while $4 billion of CMBs were outstanding at the end of 2002–03.

[c] Includes $492.0 million in securities assumed by the Government of Canada on February 5, 2001, on the dissolution of Petro-Canada Limited.

[d] Includes the bond buyback program on a cash and switch basis, and the pilot Cash Management Bond Buyback program.

Source: *Public Accounts of Canada*.

### *Impact of Marketable Bond Repurchases on the Debt Stock*

Marketable bond buyback operations permit the maintenance of a liquid new bond issue program through the repurchase of older, less liquid bonds. These operations have a neutral impact on the market value of the debt, a temporary impact on the par value of the stock of government debt, and a very modest impact on debt-servicing costs.

When outstanding bonds are repurchased at premium, the par value of the debt (the basis for accounting) increases temporarily due to the need to issue more of the new bonds to pay for the premium on the old bonds. The opposite effect is observed when bonds are bought back at a discount. This effect on the par value of the debt is temporary, as buyback operations advance the time before outstanding bonds trading at a premium or discount would need to be refinanced with new bonds at par value.

Since the inception of the program, the Government has consistently paid premiums on bonds repurchased. This is due to: the basket of eligible bonds that was exclusively composed of illiquid, high-coupon bonds trading with large premiums before 2002–03; and interest rates that have fallen to record lows since early 2000, contributing to a further increase in the premiums at which bonds were repurchased. Despite the broadening of the basket, almost 70 per cent of the bonds repurchased in 2002–03 were illiquid, high-coupon bonds accounting for 90 per cent of premiums paid.

The continued popularity and expansion of the buyback program in 2002–03 significantly increased the amount of premiums paid, increasing the par value of the debt by about $3.3 billion in 2002–03 from about $1.5 billion in 2001–02. Most of this increase is due to the increase in buyback volume from $5.6 billion in 2001–02 to $12.1 billion in 2002–03. Since 1998 the cumulative impact on the par value of the Canadian debt has been about $5.6 billion (see Table 2).

**Table 2**
*Cumulative Impact of Buyback Operations*
(on Par Value of the Debt)

| Amount repurchased | 1998–99 | 1999–00 | 2000–01 | 2001–02 | 2002–03 |
|---|---|---|---|---|---|
| | | | ($ millions) | | |
| Buybacks on a cash basis | 327 | 1,017 | 1,646 | 2,852 | 4,074 |
| Buybacks on a switch basis | – | – | – | 2 | 1,559 |
| Total bond buyback program | 327 | 1,017 | 1,646 | 2,854 | 5,633 |

Source: Department of Finance.

The cumulative impact of buybacks on the par value of the debt should reach its maximum within the next few years and diminish thereafter. The decline will occur as availability of illiquid high-coupon bonds falls. Eventually bonds may be repurchased at a discount, with the effect of reducing the par value of the debt.

### *Real Return Bonds*

In 2002–03 issuance of real return bonds (RRBs) was in keeping with the announced target of $1.4 billion, increasing the level of outstanding RRBs from $14.8 billion to $16.2 billion (from $16.8 billion to $19.1 billion including the Consumer Price Index adjustment) as at March 31, 2003 (see Table 1 on page 24). In 2002–03 the third RRB benchmark, with a December 1, 2031 maturity, was reopened four times to build a total outstanding of $5.8 billion (see Reference Table X for more information on RRB auctions).

### *Treasury Bills and Cash Management Bills*

The stock of outstanding Treasury bills and cash management bills (CMBs), which are a shorter-dated form of Treasury bills, at the end of the 2002–03 fiscal year was slightly larger than the $90-billion to $100-billion range announced in the 2002–03 *Debt Management Strategy*. The stock of outstanding Treasury bills and CMBs increased by $10.4 billion during 2002–03, to $104.4 billion at March 31, 2003 (see Table 1 on page 24). The increase was for the most part due to bonds repurchased under the cash management bond buyback program and an increase in cash balances over the year, which increased by $5.1 billion, from $11.4 billion on March 31, 2002, to $16.5 billion on March 31, 2003. During the year $12.9 billion of bonds were repurchased under the cash management bond buyback program.

There were no CMBs outstanding at the beginning of fiscal 2002–03, while $4 billion of CMBs were outstanding at the end of 2002–03.

### *Retail Debt*

In 2002–03 the level of outstanding debt held by domestic retail investors—Canada Savings Bonds and Canada Premium Bonds—decreased from $24.0 billion to $22.6 billion. Gross sales and redemptions were $3 5 billion and $4.9 billion, respectively, for a net change of -$1.4 billion in the stock of retail debt.

## Foreign Currency Debt Programs

### *Canada Bills*

In 2002–03 the level of outstanding Canada bills decreased from $3.4 billion (US$2.1 billion) to $2.6 billion (US$1.8 billion). In 2002–03 Canada bills were issued, on average, at an all-in cost of US$LIBOR less 15-20 basis points.

### *Foreign Currency Denominated Bonds*

There was no new foreign bond issuance in 2002–03. A total of $4.8 billion (US$3.3 billion) of foreign currency bonds matured in 2002–03. The total outstanding was $14.0 billion (US$9.5 billion).

### *Canada Notes*

The stock of outstanding Canada notes remained roughly unchanged at $1.2 billion (US$0.8 billion) during 2002–03. There was no new issuance.

### *Euro Medium-Term Notes*

In 2002–03 there were no new Euro Medium-Term Note transactions, and the total outstanding increased from $3.2 billion (US$2.0 billion) to $3.3 billion (US$2.2 billion) due to the appreciation of the euro compared to the Canadian dollar.

### *Cross-Currency Swaps*

In 2002–03 the Government of Canada raised $2.2 billion (US$1.5 billion) to fund the foreign exchange reserves by entering into 36 cross-currency swaps. A total of US$2.4 billion of swaps matured in 2002–03. At the end of the 2002–03 fiscal year, the outstanding amount of cross-currency swaps totalled $29.4 billion (US$18.6 billion) (see Reference Table XI for transaction details). Taking into account the effect of cross-currency swaps, foreign currency obligations were 11.5 per cent of market debt.

## Part II: Report on the 2002–2003 Debt Strategy

The federal debt strategy covers the management of the federal market debt and related operational activities, including the management of Canadian-dollar cash balances and the funding and investment of Canada's foreign exchange reserves. Annual debt strategy planning sets out the objectives for the year in each of these domains and provides for a series of initiatives. As required by legislation, the debt strategy is published and tabled in Parliament before the start of each fiscal year.

There are two main themes underlying the objectives of the 2002–03 federal debt strategy: supporting a well-functioning market in Government of Canada securities and managing risks. The Government has taken steps to support both a well-functioning primary and secondary market for Government of Canada securities. The Government supported a liquid primary market for government securities through a variety of measures to enhance programs and participation. Also, it continued to work with regulators to enhance secondary market liquidity, transparency and integrity.

In line with the increased attention paid to risk management by financial market participants in recent years, the Government has implemented a comprehensive risk management framework for treasury risks related to the debt program. The key treasury risks for the Government relate to changes in interest rates and their effect on domestic borrowing costs (interest rate risk), and the Government's credit exposure to financial institution counterparties with which it transacts in the management of the debt (credit risk). In 2002–03 significant work related to the Government's management of both interest rate and credit risk took place.

### A Well-Functioning Government of Canada Securities Market

The advent of a period of federal budgetary surpluses in the 1990s ushered in a new era in federal debt management: one focused on maintaining a well-functioning market in an environment of declining borrowing needs. Over the past several years, the majority of federal debt strategy initiatives have been in this domain, and this focus continued in 2002–03.

A well-functioning wholesale market in Government of Canada securities benefits the Government as well as a wide range of market participants. For the Government as a debt issuer, a well-functioning market attracts investors and ensures that funding costs are kept low. For market participants, a liquid and active secondary market in government debt provides credit-risk-free assets for investment portfolios, a pricing benchmark for other debt issues and swaps, and a primary tool for hedging risk.

The Government's efforts to maintain and enhance the market for its securities have targeted both the issuance of bonds and Treasury bills through auctions, and the liquidity and efficiency of the secondary market. Program initiatives of note in recent years include increasing the target sizes for benchmark 2-, 5-, 10- and 30-year bonds and the size of new bond issues, and implementing bond buybacks. The Department of Finance and the Bank of Canada have also worked with market participants and securities regulators to develop a framework to enhance the transparency and integrity of the fixed-income market. In 2002–03 these areas continued to be the primary focus of government initiatives.

The section entitled "Debt, Cash and Reserve Management Indicators" describes commonly used indicators of a well-functioning securities market. These include the degree to which auctions in the primary market are well bid, the level of liquidity and trading in the secondary market, and cash and reserves management performance. While there are a number of factors that affect these indicators, debt managers follow these measures when examining government debt management initiatives. The measures, however, do not by themselves define the success of specific government debt management policies.

### *Marketable Bond Program*

The use of liquid benchmark bond issues according to a regular, pre-announced quarterly calendar has been a key feature of the Government's approach to funding domestic operational requirements since the early 1990s. There are currently auctions of 2-, 5- and 10-year issues every quarter, and 30-year issues on a semi-annual basis. Each issue contributes to the creation of a large and liquid benchmark at the respective maturity.

The gross bond program increased by $2.1 billion in 2002–03, while the net bond program decreased by $4.3 billion (see Table 3).

**Table 3**
*Bond Program*

| | 1998–99 | 1999–00 | 2000–01 | 2001–02 | 2002–03 |
|---|---|---|---|---|---|
| | | | ($ millions) | | |
| Bonds issued at auctions | 36,300 | 44,750 | 38,500 | 39,800 | 36,400 |
| Bonds issued at switches | – | – | – | 400 | 5,900 |
| Gross bond program | 36,300 | 44,750 | 38,500 | 40,200 | 42,300 |
| Buybacks on a cash basis | 1,000 | 3,263 | 2,832 | 5,258 | 7,067 |
| Buybacks on a switch basis | – | – | – | 387 | 4,999 |
| Total bond buyback program | 1,000 | 3,263 | 2,832 | 5,645 | 12,066 |
| **Net bond program** | 35,300 | 41,487 | 35,668 | 34,556 | 30,234 |

Source: Department of Finance.

In 2002–03 the initiatives undertaken in the bond program to maintain and develop a well-functioning market in Government of Canada securities were:

**30-Year Issuance:** The Government reaffirmed its commitment to continued issuance of 30-year bonds. There was a strong consensus among market participants that issuance of 30-year Government of Canada bonds is needed to provide a long-dated asset (given the limited supply of alternative long-term fixed-income instruments in Canada, particularly for pension fund and insurance company portfolios), as well as a pricing benchmark for other instruments.

**10-Year Issuance:** Following consultations in the summer of 2002, the Government committed to maintain an annual 10-year benchmark cycle to ensure regularity and transparency, and support liquidity in the market for Government of Canada securities. This initiative also supports a liquid futures market by maintaining a viable basket of eligible government securities. However, at that time, the annual cycle constrained the building of a large benchmark. On September 25, 2002, the Government of Canada closed the June 2012 10-year benchmark at $11.6 billion outstanding, resulting in a slight undershoot of the benchmark target of $12 billion–$15 billion. (The benchmark target range for 10-year bonds was subsequently changed from $12 billion–$15 billion to $10 billion–$14 billion starting in fiscal year 2003–04).

**2-Year Issue Size:** In the consultations in the summer of 2002, most market participants agreed that the issuance of 2-year bonds could be modestly reduced at times when the 2-year benchmark being built is fungible with an existing large, liquid issue. Therefore, in order to limit the total amount of bonds maturing in December 2004, the August 28, 2002 2-year auction size was held to $3 billion, a reduction of $500 million from prior 2-year issues.

**Turnaround Time for Auctions:** In November 2002 the turnaround time for auctions was reduced from 15 minutes to 10 minutes. The move to shorter processing times, in keeping with technological advancements and sovereign best practices, reduces participants' market risk and supports broad participation in government auctions.

### *Bond Buyback Programs*

Buyback programs have become sizeable and play a strategic role in maintaining an active new issue bond program. There are two types of bond buyback programs currently in place: regular bond buybacks and cash management bond buybacks. Regular bond buybacks, which take place on a cash or switch basis, permit the maintenance of a liquid new bond issue program by buying back older, less liquid bonds with a remaining term to maturity from 18 months to 25 years. The second kind of buyback, the cash management bond buyback, aids in the management of the Government's cash balances by buying back bonds maturing in up to 18 months.

#### *Regular bond buyback operations*

Regular bond buyback operations are conducted on a cash and switch basis.

***Bond buyback operations on a cash basis:*** These operations involve the exchange of less liquid bonds for cash and are conducted shortly after auctions of similar maturity bonds. They were introduced on a trial basis in 1998–99 to enhance liquidity in the primary market for Government of Canada securities. Based on favourable performance and market reaction, the program was implemented on an ongoing basis in 2000–01 and now plays an important role in maintaining the auction size of the new issue bond program. Since 2001–02 buyback operations on a cash basis have been conducted after every nominal bond auction.

***Bond buyback operations on a switch basis:*** These operations involve the exchange of less liquid bonds for new issue (replacement) bonds on a duration-neutral basis. Buybacks on a switch basis assure minimal impact on bondholders' market risk and thus broaden participation in buyback operations. The first pilot switch operation was successfully conducted in the fourth quarter of 2001–02 in the 30-year sector for an amount of $400 million.

Given strong support by market participants during 2002–03, the pilot program was continued and gradually expanded to all maturities. This provided market participants with more frequent access to benchmark bond issues and helped reduce market participants' risk. Switch buybacks are now held periodically and are announced in the quarterly bond auction schedule.

Regular bond buyback operations were conducted on a larger scale than in 2001–02 mainly due to a broader utilization of buyback operations on a switch basis. The regular bond buyback operations permitted the issuance of a larger amount (+$12 billion) of new benchmark bonds than in the absence of a buyback program.

In 2002–03 the initiatives undertaken to enhance the functioning of regular bond buybacks were:

***Broadening the buyback basket:*** At the inception of the regular bond buyback program, the basket of eligible bonds was exclusively composed of illiquid, high-coupon bonds. As dealers and customers cleared out their inventories, it became necessary to broaden the buyback basket in order to maintain current bond issuance and auction sizes.

In 2002–03 the buyback basket was expanded to include some older benchmark bonds and their fungibles. Bonds that continue to be excluded from buybacks include issues in the 2-, 5- and 10-year sectors that are currently being built up as a benchmark, the current and preceding benchmark, and those having maturities equal to or greater than 25 years. The decision on specific bond issues to be included in buyback operations takes into account the views of market participants and is announced with the Call for Tenders.

***Introducing a $6-billion floor for old benchmark bonds:*** In response to comments received during the summer 2002 consultations, the Government announced that outstanding amounts of older benchmarks would not be reduced below $6 billion. This operational enhancement was introduced to help maintain liquidity in older, large off-the-run benchmarks targeted by the buyback program. When two or more issues are fungible, the total amount of

Government of Canada bonds maturing on that date will be considered in the calculation of the $6-billion minimum threshold. However, the conditions governing the pilot cash management bond buyback program will apply when bonds become eligible for this repurchase program.

***Increasing the announced buyback ceiling:*** In order to allow the Government to take advantage of favourable buyback opportunities when they exist, the announced ceiling for individual buyback operations was raised from 2001-02 levels for regular buybacks (both on a cash and switch basis) and cash management bond buyback operations. Therefore, on many occasions, when conditions did not warrant buying back up to the announced ceiling, the amount purchased by the Government was lower than the announced ceiling.

***Moving up the submission deadline for buyback operations on a cash basis:*** During the summer 2002 consultations, market participants indicated that reducing the time period between the publication of auction and buyback results would reduce risk and provide an incentive for increased participation. In response to these comments, the submission deadline for buyback operations on a cash basis was advanced from 1:15 p.m. to 1:00 p.m. starting November 25, 2002. In tandem with the reduced turnaround time for bond auctions announced the same day, this reduces the time period between the publication of auction and buyback results from 1 hour to 35 minutes.

***Timing of switch operations:*** Buyback operations on a switch basis were moved from 12:30 p.m. to 10:30 a.m. to reflect market participants' preferences and to increase the participation of institutional investors. Typically held at 10:30 a.m. on Wednesdays, these operations were also held on some Thursdays when Wednesdays were not available due to holidays or other special events. This initiative became effective in September 2002.

***Turnaround time for regular buyback operations:*** In November 2002 the turnaround time for regular buyback operations was reduced from 30 minutes to 15 minutes. The move to shorter processing times, which is in keeping with technological advancements and sovereign best practices, reduces participants' market risk and supports broad participation in government operations.

### *The Cash Management Bond Buyback Program*

The cash management bond buyback (CMBB) program, introduced on a pilot basis in early 2001, was implemented primarily to help manage the Government's cash requirements by reducing the high levels of government cash balances needed to redeem large bond maturities.

In contrast to the regular bond buyback program aimed at supporting a full new issue bond program, the CMBB program involves buying back bonds coming to maturity in the near future. By reducing the need to accumulate large cash balances leading up to large bond maturities, the CMBB program also smoothes out seasonal fluctuations in Treasury bill issuance.

The first CMBB of $500 million was held in January 2001 and a total of $2.5 billion was repurchased during the 2000–01 fiscal year. In 2002–03 the CMBB program increased from $11.5 billion in 2001–02 to almost $12.9 billion due to the increase in operational frequency.

In 2002–03 the initiatives undertaken to enhance the functioning of the CMBB program were:

***Increasing the announced buyback ceiling:*** In order to allow the Government to take advantage of favourable buyback opportunities when they exist, the announced ceiling for individual buyback operations was raised from 2001–02 levels for CMBB operations. Therefore, on occasions when conditions did not warrant buying back up to the announced maximum, the amount purchased by the Government was lower than the announced ceiling.

***Turnaround time for CMBB operations:*** On November 25, 2002, the turnaround time for CMBB operations was shortened from 30 minutes to 15 minutes to reduce participants' market risk and support participation.

### *Treasury Bill Program and Cash Management Bill Programs*

Since the spring of 1999, the Government has regularly sought the views of market participants on the structure and operation of the Treasury bill and cash management bill (CMB) programs. In 2002–03 the majority of market participants continued to indicate that they were generally satisfied with the functioning of the two programs and that no major adjustment was required.

In 2002–03 Treasury bill issuance increased by $23.5 billion, from $189.5 in 2001–02 to $213.0 billion. Issuance increased by $14.1 billion in the 3-month tranche and $4.7 billion in both the 6- and 12-month tranches. During the year $23.8 billion of CMBs were issued through 13 auctions with maturities ranging between several days to six weeks (see Table 4).

***Turnaround time for Treasury bill and CMB auctions:*** On November 25, 2002, the operational turnaround time was reduced from 15 minutes to 10 minutes.

**Table 4**
*Treasury Bill and CMB Program*

| | 1998–99 | 1999–00 | 2000–01 | 2001–02 | 2002–03 |
|---|---|---|---|---|---|
| | | | ($ millions) | | |
| CMB | 25,750 | 19,700 | 9,000 | 7,500 | 23,750 |
| 3-month Treasury bills | 90,800 | 100,700 | 88,100 | 103,300 | 117,400 |
| 6-month Treasury bills | 42,600 | 46,600 | 38,600 | 43,100 | 47,800 |
| 12-month Treasury bills | 39,500 | 46,600 | 38,600 | 43,100 | 47,800 |
| Treasury bills | 172,900 | 193,900 | 165,300 | 189,500 | 213,000 |
| **Total** | 198,650 | 213,600 | 174,300 | 197,000 | 236,750 |

Source: Department of Finance.

### *Receiver General AM and PM Auctions*

The Bank of Canada conducts two auctions per day for the Government's domestic cash balances. The morning or "AM" auction is held at 9:15 a.m. while the afternoon or "PM" auction is held at 4:15 p.m. The AM auction is primarily for the purpose of investing surplus cash balances for periods that range from one day to several weeks. The purpose of PM auctions is to invest residual government cash balances resulting from cash flows taking place during the day (following the AM auction) and to facilitate the Bank of Canada's management of daily settlement balances in the country's Large Value Transfer System (LVTS). The PM deposits typically mature the following business day.

Prior to September 10, 2002, the AM and PM deposit auctions were conducted on an uncollateralized basis, and Canadian financial institutions that were direct clearers in the LVTS were the only eligible participants. Starting on September 10, 2002, a new collateralized framework was implemented for the AM auctions in order to strengthen the management of credit risk and increase competition by opening the auctions to a wider range of participants. No changes were made to the PM auction framework.

The average daily level of Receiver General cash balances at the financial institutions increased from $7.1 billion in 1998-99 to $10.2 billion in 2000-01, then decreased to $6.1 billion in 2002-03.

Increasingly large bond maturities (concentrated on March 1, June 1, September 1 and December 1), the introduction in 1999 of the LVTS, and unexpectedly strong financial outcomes all contributed to the growing levels of average cash balances in 1999-00 and 2000-01.

Average daily cash balances declined in 2001-02 and 2002-03 as a result of smaller government surpluses, the impact of the cash management bond buyback program introduced in January 2001, a more mature LVTS and fewer large bond maturities (there were no large maturities in March 2002 or 2003—see Table 5).

**Table 5**
*Average Daily Receiver General Cash Balances Held at Financial Institutions*

| | 1998-99 | 1999-00 | 2000-01 | 2001-02 | 2002-03 |
|---|---|---|---|---|---|
| | | | ($ millions) | | |
| Average daily cash balances | 7,113 | 9,021 | 10,188 | 7,921 | 6,139 |

Source: Department of Finance.

### *Market Transparency and Integrity*

The Government and the Bank of Canada have a strong interest in improving the transparency of the Government of Canada securities market because transparent markets can enhance the integrity and attractiveness of the Government of Canada securities market for a wide array of investors. This in turn supports the Government's debt strategy objective of achieving stable, low-cost funding, and the Bank's interest in an efficient mechanism for the transmission of monetary policy.

The Department of Finance and Bank of Canada have been actively involved in supporting the development of more transparent markets for many years. In particular, there have been ongoing discussions with Canadian securities regulators and market participants on the development of a regulatory framework for electronic or alternative trading systems since rules were first proposed in 1999. A key concern has been to facilitate enhanced market transparency without adversely affecting the liquidity of the Government of Canada securities market. For more information on this issue, please see the Web sites of the Bank of Canada (www.bankofcanada.ca) and the Ontario Securities Commission (www.osc.gov.on.ca).

## Managing Treasury Risk

The debt, cash and reserves management operations of the Government of Canada engender exposure to various forms of financial risk, as detailed in the box on page 36. The primary focus of risk management in the context of federal debt strategy has always been the management of the structure of the domestic debt, which, due to the impact of changing interest rates, is by far the most significant form of financial risk to which the Government is exposed.

In recent years, in addition to focusing on the maintenance of a prudent debt structure, the Government has introduced a comprehensive risk management framework for identifying and managing all forms of treasury risk, in particular the market, credit, operational and legal risks related to the financing and investment of its foreign exchange reserves and the investment of its Canadian-dollar cash balances.

The Government's risk management policies, supported by the creation of a special risk unit at the Bank of Canada, call for prudent management of treasury risks based on best practices. Risk tolerances are low, calling for market risk to be immunized to the greatest extent possible and the maintenance of high credit quality and portfolio diversification standards.

The major considerations and recent initiatives in these domains are addressed in this section, while a detailed description of the analytical tools used to assess the debt structure can be found in Annex 1.

***Forms of Treasury Risk***

| *Risk Type* | *Definition* | *Government Exposure* |
|---|---|---|
| Interest rate risk | Risk of loss arising from unexpected changes in interest rates. | Primarily in the structure of the debt stock through the amount of floating-rate debt. |
| Foreign exchange risk | Risk of loss arising from changes in values of currencies. | In the value of reserve assets. |
| Credit risk | Risk of loss arising from default or downgrade of a counterparty. | In swap contracts, during the settlement period of transactions and in foreign currency investments (i.e., bonds, deposits). |
| Operational risk | Risk of loss arising from deficiencies in information systems and internal controls or from human error. | In all transactions related to debt, cash management and reserves management. |
| Market risk | Risk of loss arising from movements in foreign interest rates. | In the value of foreign currency debt and assets. |
| Legal risk | Risk of loss arising from contracts that are not legally enforceable or appropriately documented or executed. | In government contracts related to debt and reserves management (e.g., swap and repo contracts). |
| Liquidity risk | Risk of loss arising when a security asset cannot be sold at or near the previous market price because of inadequate market depth or market disruption. | In the value of reserve assets. |
| Refinancing risk | Risk of loss arising when a security (liability) cannot be fully sold because of market disruption or lack of demand. | At domestic auctions and for foreign currency debt. |

### *Balancing Prudence and Cost: Debt Structure*

As noted above, the federal debt structure has significant exposure to interest rate risk. In simple terms, every year a sizable portion of the debt matures and must be refinanced. As a result, the Government is exposed to the risk of an increase in interest rates that could potentially disrupt the fiscal plan.

This situation makes choosing an appropriate debt structure—one that balances prudence and cost savings—an important decision. In determining the appropriate debt structure, the Government generally faces a trade-off between keeping borrowing costs low and ensuring that the cost impact of unexpected increases in interest rates does not exceed its tolerance for risk. Specifically, long-term instruments such as Government of Canada bonds typically have higher debt-servicing costs than short-term instruments such as Treasury bills. On the other hand, interest costs for outstanding bonds are known with certainty over their entire life, while Treasury bills need to be refinanced several times throughout the year at new prevailing market interest rates.

The main operational measure used to manage the debt structure is the mix of fixed-rate and floating-rate debt instruments that make up the debt stock. The fixed-rate share of the debt is the proportion of interest-bearing debt having fixed rates—debt that does not mature or need to be re-priced within a year—relative to the total interest-bearing debt stock. Therefore, debt-servicing costs increase (decrease) and interest rate risk decreases (increases) with a higher (lower) fixed-rate share.

During the 1990s the Government raised the fixed-rate share of the federal debt from one-half to two-thirds to provide more cost stability in an environment of fiscal and current account deficits, volatile interest rates and high debt levels. As noted in the 2003 budget, by establishing a more prudent fixed-rate debt structure and reducing the debt, the Government reduced the sensitivity of its annual debt-service charges to changes in interest rates. For example, a 100-basis-point shock in interest rates in 2002–03 would have increased annual interest costs by $0.8 billion under the current structure, compared to $1.8 billion at the time of the 1995 budget.

### *Finding a New Balance*

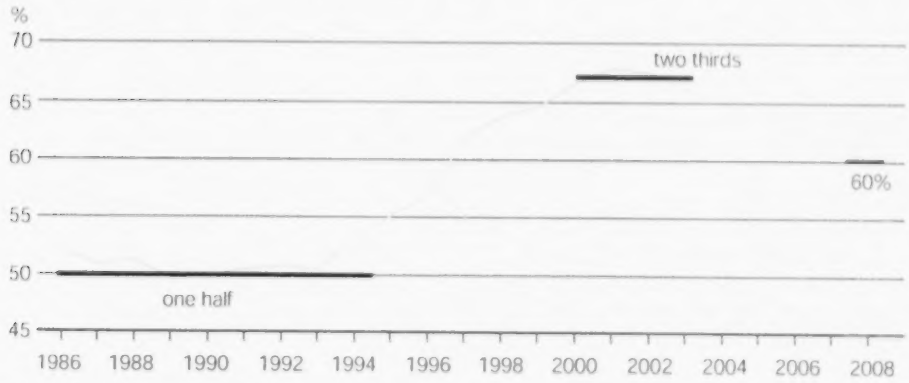
The target debt structure announced in the 2002–03 *Debt Management Strategy* was two-thirds fixed-rate debt. However, during the year, analysis was undertaken which resulted in a change in the target.

For the past five fiscal years, including 2002–03, the fixed-rate portion of the debt has been managed around a two-thirds target. Over the same period Canada's economic and fiscal position has strengthened substantially. Canada now has low and stable inflation and interest rates, lower foreign indebtedness and a current account surplus. In addition, the reduction in the debt level has provided Canada with greater financial stability, reduced vulnerability to events happening beyond our borders, and contributed to the restoration of Canada's triple-A credit rating.

As a result of these positive economic and fiscal developments, analysis conducted in 2002 indicated that the Government was in a position to adjust its debt structure to lower future financing costs without exposing itself to significantly higher levels of risk. Consequently, the Government announced a change in the debt structure target in the 2003 budget. The fixed-rate portion of the debt will be lowered from the previous target of two-thirds to 60 per cent over a five-year period (see Figure 1).

The decision to alter the target debt structure is aimed at reducing borrowing costs for the Government without compromising debt cost stability. Based on the 2003 budget outlook, the planned change to the debt structure is expected to reduce the Government's net debt-servicing costs by up to $750 million during the five-year transition period and by up to $500 million, on average, each year thereafter. Annex 1 describes in more detail the analytical tools and results supporting the decision.

Figure 1
**Target Fixed-Rate Share of the Debt**




Source: Department of Finance.

### *Managing the Risks of Holding Cash and Reserves*

In recent years the Government has put in place frameworks to manage financial risk and instituted practices to limit risk exposure, notably its exposure to the financial institution counterparties holding cash and foreign exchange reserves.

In the late 1990s the Government moved to put in place a governance framework that separates risk management from treasury operations. A Risk Management Unit was established in 1997 to monitor, report and advise on the risk position of the Government. A Risk Management Committee of senior officials of the Department of Finance and the Bank of Canada meets regularly to review risk reports and to provide guidance and accountability on the Government's treasury risk policies.

Foreign currency reserve assets and the liabilities financing those assets have been managed together on a portfolio basis since 1998, based on the same principles used by private sector financial institutions. The Government uses an asset-liability matching framework, whereby assets and liabilities financing these assets are matched (as closely as possible) in currency and duration, so that the Government is not exposed to currency and interest rate risks. The risk of material loss arising from interest and/or currency risk is very low.

In the late 1990s the Government also developed a rigorous, comprehensive credit risk system that is consistent with best practices in credit risk management and includes credit exposure limits pertaining to issuers and counterparties across all lines of business. Specifically, the management of Canadian-dollar cash balances and the investment of reserve assets are governed by detailed investment and credit guidelines approved by the Minister of Finance. The guidelines limit the Government's credit exposure to commercial financial institution counterparties and to the issuer of securities held by the Government in the foreign currency reserve portfolio.

In 2002–03 the Government continued to further strengthen its risk management framework by implementing collateral management frameworks and amending its investment guidelines. Collateral management systems are increasingly the norm in capital markets as a way of managing credit risk. Under these frameworks, high-quality collateral (e.g., cash, securities) is posted to the Government when its credit exposure to financial institution counterparties exceeds specified limits.

### *Collateral Framework for Investment of Canadian-Dollar Cash Balances*

As indicated earlier, a new collateralized framework for AM auctions was implemented in September 2002. The new framework strengthens the management of the credit risks involved in the investment of cash balances through the use of credit ratings, credit lines and collateral agreements, and increases competition in the auction of cash balances by opening the AM auctions to a wider range of participants. The number of eligible participants has increased from 13 to 20 institutions. The PM auction remains unchanged (see the Bank of Canada Web page www.bankofcanada.ca/en/auction/rec_general.pdf for further information on terms and conditions).

### *Collateral Framework for Swaps and Foreign Currency Cash Balances*

Cross-currency swaps of domestic obligations have been used since March 1995 to fund the foreign exchange reserves, as they are highly cost-effective compared to other sources of foreign currency funds. As a result, the Government's swap portfolio has increased significantly—as of March 31, 2003, it stood at $29.4 billion.

To mitigate the credit risk associated with swaps, the Government implemented a collateral management framework for swaps in April 2002. High-quality collateral is posted to the Government if individual credit exposures arising from changes in the marked-to-market values of swap contracts exceed pre-set limits. As of March 31, 2003, the swap collateral framework included 10 financial institution counterparties.

In addition to the swap collateral framework, in the latter part of 2002–03 the Government developed a US-dollar repo program to reduce the use of uncollateralized short-term US-dollar deposits with commercial banks. Under the repo framework, collateral is posted to the Government to protect US-dollar cash invested with the financial institution counterparties. As of March 31, 2003, the Government had signed three counterparties to its US-dollar repo framework.

### *Amendment of Investment and Risk Guidelines*

With the implementation of a collateral management framework for the Government's cross-currency swap program, the Government modified its credit guidelines in 2002 to accept A-rated financial institutions as eligible counterparties for deposits and swaps. This change will help the Government further diversify its investments across financial institution counterparties without increasing risk significantly. Credit exposure to A-rated financial institutions will be maintained within prudent standards, consistent with best practices of comparable sovereigns and major market participants.

The investment guidelines governing the management of the reserve asset portfolio were also modified in 2002 to allow a limited amount of securities of A-rated sovereigns to be held within prudent limits (previously the Government could only invest in AA- and AAA-rated sovereigns), mirroring the change to allow limited exposure to A-rated financial counterparties involved in reserves management. This change is in line with investment practices of a number of OECD sovereigns and will allow the Government to further diversify its reserves investment portfolio.

### *Maintenance of Supplementary Liquidity*

In August 2002 the Government successfully renegotiated its existing US$6-billion standby credit facility with international banks. The standby facility provides supplementary liquidity to meet the Government's needs in the event that market disruption makes borrowing through securities markets impossible. Under the renewal of the facility, the composition of the banks in the facility was changed, and the maturity date was extended from 2003 to 2007. No other changes were made to the terms of the facility.

# Part III: Debt, Cash and Reserves Management Indicators

This section is divided into three types of measures: the outcome of operations and activity with respect to domestic debt; indicators of cash management performance; and measures of reserves funding and investment. It also summarizes recent external evaluations of government programs. A detailed discussion of the measures used to manage and evaluate the risk structure of the debt stock is covered in Annex 1.

The indicators are intended to provide interested parties with an understanding of some of the key measures that debt managers follow. The measures do not, by themselves, define the success of specific government debt management policies. However, they serve as useful guideposts in helping to assess the outcomes of the Government's debt management initiatives.

Measures of a well-functioning securities market include the degree to which auctions in the primary market are well bid and the level of liquidity and trading in the secondary market. In 2002–03 the Government's Treasury bill and bond auctions continued to be well bid. Primary dealers play the major role at auctions except in the case of real return bond auctions, where customers' winnings exceed that of primary dealers. The secondary market for Government of Canada securities continues to experience healthy trading volumes and turnover ratios that compare favourably to those of other countries. Primary dealers also play a major role in secondary markets, with the top 10 participants accounting for about 90 per cent of turnover of Treasury bills and bonds.

## Domestic Debt and Government of Canada Securities Market

There are a number of measures of outcomes in the area of domestic debt management. They can be divided into two groups: those associated with the debt issuance process (the primary market) and those dealing with post-issuance trades (the secondary market).

### *Primary Market Measures*

#### *Marketable Bond, Treasury Bill and Cash Management Bill Auctions*

The two most conventional measures of auction performance are the auction coverage and tail.

The *auction coverage* is defined as the total size of bids received divided by the auction size. In this regard, a cover statistic of one is essential and a higher statistic is generally better, as it indicates active bidding and therefore lower costs for the Government.

The Terms of Participation in government auctions require larger dealers (primary dealers) to bid 50 per cent of their bidding limit at a reasonable rate. Maximum coverage ratios from primary dealers (which represents about 85 per cent of winning bids) could reach a maximum of about 2.6 for bond auctions and 2.4 for Treasury bill and CMB auctions, while minimum coverage, assuming that all primary dealers bid at their minimum bidding limit, would total about 1.3 for bond auctions and 1.1 for Treasury bill and CMB auctions.

In 2002–03 coverage remained generally stable for Treasury bill and bond auctions and increased for real return bond auctions. Overall, coverage has remained stable over the last four years (see Table 6).

The *auction tail* is the number of basis points between the highest yield accepted and the average yield. In this case, smaller is better as it indicates strong bidding and therefore lower costs.

These two measures, combined with the yield of the securities issued, describe the quality of an auction in terms of its competitiveness and its impact on the cost of borrowing.

In 2002–03 tails improved in 3-month Treasury bill and medium- to long-term bond auctions, especially for the 30-year bond auctions. Tails widened for 6- and 12-month Treasury bills and for 2-year auctions. Overall, tails have increased slightly from 2001–02 but still remain lower than four years ago (see Table 6).

**Table 6**
*Performance at Auctions*

| | Coverage | | | | | Tail | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1999–00 | 2000–01 | 2001–02 | 2002–03 | 4-yr avg. | 1999–00 | 2000–01 | 2001–02 | 2002–03 | 4-yr avg. |
| CMB | 2.12 | 1.98 | 1.94 | 1.98 | 2.01 | 2.48 | 2.31 | 1.43 | 1.38 | 1.90 |
| 3-month | 1.86 | 1.96 | 1.84 | 1.93 | 1.90 | 1.21 | 1.08 | 1.28 | 1.16 | 1.18 |
| 6-month | 1.97 | 2.17 | 2.03 | 1.99 | 2.04 | 1.18 | 0.92 | 0.83 | 0.85 | 0.95 |
| 12-month | 1.86 | 2.06 | 1.88 | 1.86 | 1.91 | 1.10 | 0.96 | 0.93 | 1.00 | 1.00 |
| 2-year | 2.38 | 2.42 | 2.24 | 2.23 | 2.32 | 0.65 | 0.58 | 0.66 | 0.71 | 0.65 |
| 5-year | 2.43 | 2.46 | 2.23 | 2.29 | 2.35 | 0.66 | 0.50 | 0.74 | 0.65 | 0.64 |
| 10-year | 2.25 | 2.54 | 2.30 | 2.33 | 2.35 | 1.06 | 1.08 | 0.89 | 0.80 | 0.96 |
| 30-year | 2.29 | 2.29 | 2.36 | 2.39 | 2.33 | 1.58 | 2.75 | 1.07 | 0.76 | 1.54 |
| RRB* | 3.18 | 3.06 | 2.75 | 3.16 | 3.03 | n.a. | n.a. | n.a. | n.a. | n.a. |
| Weighted Avg.** | 1.98 | 2.12 | 1.96 | 1.99 | 2.01 | 1.11 | 0.99 | 0.91 | 1.01 | 1.01 |

* Auction tails for RRBs are not relevant since RRBs are distributed through single-price auctions.

** Weighted average excludes CMBs.

Note: The peak in the average tail for 30-year auctions in 2000–01 is due to one of the two 30-year auctions (April 19, 2000 auction), which had an unusually large tail of 4.4 basis points, increasing the annual average to 2.75 basis points.

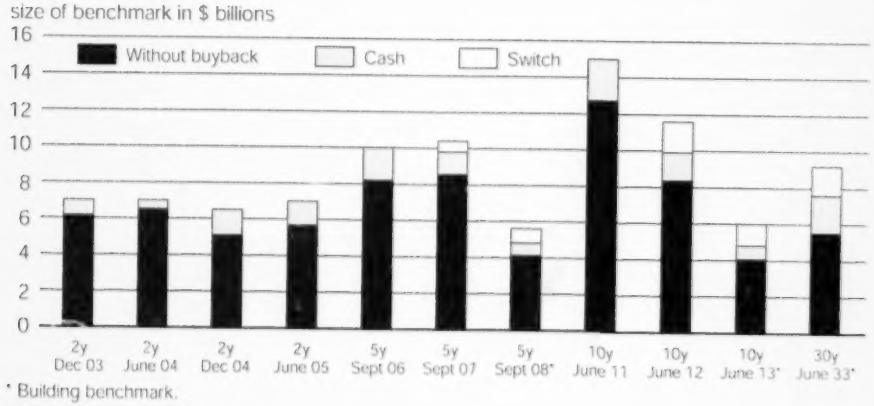
Source: Bank of Canada.

### *Effectiveness of the Regular Bond Buyback Program*

The bond buyback program was introduced to enhance liquidity and maintain an active new issuance in the primary market for Government of Canada securities. Specifically, cash and switch buybacks were introduced to help maintain large benchmark issues.

On average, buybacks have helped to maintain auction sizes that are $500 million larger than they would have been without the buyback program. Meanwhile, buybacks on a switch basis have provided an alternative to issuance at auctions and have contributed to the development of more liquid benchmarks, as shown by Chart 9.

Chart 9
**Impact of Regular Buyback Program on Benchmark Sizes**
**As of March 31, 2003**




* Building benchmark.

Source: Department of Finance.

### *Cash Management Bond Buyback Program*

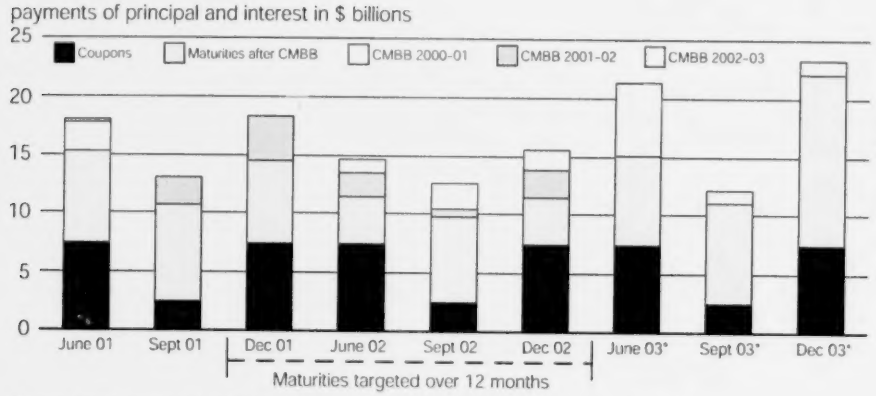
The cash management bond buyback (CMBB) program was implemented to help manage the Government's cash requirements by reducing the high levels of government cash balances needed to redeem large bond maturities. The program also helped to smooth variations in Treasury bill auction sizes over the year.

The CMBB program has lowered the Government's cash requirements at most large-maturity dates. In particular, as of March 31, 2003, the CMBB program had already reduced the June 1, 2003 cash requirement from about $21 billion to about $15 billion by reducing June 2003 bond maturities by $6.2 billion. Since the inception of the program, the CMBB program has reduced sizes of bonds that were targeted for buyback over a full year by an average of 38 per cent (see Chart 10).

Chart 10

**Impact of CMBB Operations on the Government's Large Payments**

**As of March 31, 2003**




* These bonds continued to be targeted by operations conducted after March 31, 2003.

Source: Department of Finance.

### *Receiver General (RG) Auctions*

As for bond and Treasury bill auctions, coverage and tail provide useful indicators of RG auction performance. For information on auction yield and the cost of carrying Receiver General cash balances, please see the later section on Canadian-dollar cash balances.

In 2002-03 RG coverage was better than the average of the past three years, especially for AM auctions. This result was to be expected, as the new RG collateralization framework encourages more participation in AM auctions.

AM auction tails improved in 2002-03 by 30 per cent over the four-year average and were quite stable over the year. AM auction tails for the first five months of the fiscal year (before collateralization) were not significantly different from tails for the last seven months of the fiscal year (after collateralization—see Table 7). PM auction tails improved compared to the last four years from 3.64 in 1999-2000 to 2.42 in 2002-03 (average for the fiscal year).

**Table 7**
*Performance at Receiver General Auctions*

| | 1999–00 | 2000–01 | 2001–02 | 2002–03 | | |
|---|---|---|---|---|---|---|
| | | | | April to Sept 10 2002 | Sept 11* 2002 to March 2003 | 4-yr avg. |
| AM Auctions | | | | | | |
| Coverage | 3.28 | 2.67 | 2.55 | 3.32 | 3.53 | 2.95 |
| Tail | 1.47 | 1.08 | 1.89 | 0.69 | 0.91 | 1.34 |
| PM Auctions | | | | | | |
| Coverage | 1.89 | 1.97 | 2.33 | 2.44 | 2.45 | 2.12 |
| Tail | 3.64 | 4.14 | 2.40 | 2.81 | 2.08 | 3.28 |

* Sept.10, 2002 marked the start of AM auction collateralization.
Source: Bank of Canada.

## *Activity of Dealers and Accounts*

This section provides information on participation of government securities distributors (primary dealers and other government securities dealers) and customers (institutional investors) in the primary and secondary markets for Government of Canada securities. Primary market activity shares are calculated using participants' allotment amounts at auctions during the fiscal year, and secondary market activity shares are calculated using participants' trading volumes during the fiscal year.

### *Nominal Bonds*

In 2002–03 primary dealers were allotted 91.8 per cent of nominal bond auctions while customers were allotted 5.6 per cent (see Table 8). The 10 most active participants bought 88.7 per cent of the bonds. These percentages are in line with those observed in previous years.

**Table 8**
*Bond Auctions Share (Per Cent) of Amount Allotted to Participants*
(Excluding Real Return Bonds)

| Fiscal year | PDs | Non-PDs | Customers | Top 10 participants |
|---|---|---|---|---|
| 1999–00 | 88.1 | 4.9 | 7.0 | 84.8 |
| 2000–01 | 91.5 | 2.7 | 5.8 | 86.1 |
| 2001–02 | 83.7 | 6.4 | 9.8 | 82.2 |
| 2002–03 | 91.8 | 2.5 | 5.6 | 88.7 |

Source: Bank of Canada.

### *Real Return Bonds*

Unlike the situation in nominal bonds, the primary market in RRBs was split almost evenly between dealers and customers. The 10 most active participants in RRB auctions were allotted 63.9 per cent of the auction, which is in line with historical averages (see Table 9).

**Table 9**
*RRB Auctions Share (Per Cent) of Amount Allotted to Participants*

| Fiscal year | PDs | Non-PDs | Customers | Top 10 participants |
|---|---|---|---|---|
| 1999–00 | 45.9 | 3.4 | 50.7 | 65.9 |
| 2000–01 | 45.5 | 2.7 | 51.8 | 68.4 |
| 2001–02 | 39.0 | 3.9 | 57.2 | 59.7 |
| 2002–03 | 47.9 | 0.9 | 51.2 | 63.9 |

Source: Bank of Canada.

### *Bond Buybacks*

Primary dealers are usually the dominant participants in bond buyback operations. Customers' participation reached a peak of 13.8 per cent in 2001–02, when a few customers were very active in buybacks on a cash basis. In 2002–03 customers' participation returned to a lower level and the primary dealers' share increased to previous years' levels, at 96.4 per cent of operations (see Table 10).

**Table 10**
*Bond Buyback Operations Share (Per Cent) of Amount Allotted to Participants*
(Excludes Cash Management Bond Buybacks)

| Fiscal year | PDs | Non-PDs | Customers* | Top 10 participants |
|---|---|---|---|---|
| 1999–00 | 97.6 | 2.4 | 0.0 | 97.2 |
| 2000–01 | 94.1 | 2.4 | 3.5 | 97.1 |
| 2001–02 | 86.2 | 0.0 | 13.8 | 98.4 |
| 2002–03 | 96.4 | 1.7 | 1.9 | 94.5 |

* Results may underestimate customer participation. Contrary to Treasury bill and bond auctions, customers do not have to inform the Bank of Canada about their participation at buyback operations.

Source: Bank of Canada.

### *Cash Management Bond Buyback Program*

Primary dealers are usually the only participants in CMBB operations, with a share of 100 per cent in 2000–01 and 2002–03 (see Table 11).

**Table 11**
*CMBB Operations Share (Per Cent) of Amount Allotted to Participants*

| Fiscal year | PDs | Non-PDs | Customers* | Top 10 participants |
|---|---|---|---|---|
| 2000–01 | 100.0 | 0.0 | 0.0 | 100.0 |
| 2001–02 | 95.9 | 1.2 | 2.9 | 99.2 |
| 2002–03 | 100.0 | 0.0 | 0.0 | 100.0 |

* Results may underestimate customer participation. Contrary to Treasury bill and bond auctions, customers do not have to inform the Bank of Canada about their participation at buyback operations.

Source: Bank of Canada.

### *Treasury Bills*

For 2002–03 primary dealers accounted for 84.1 per cent of amounts allotted during Treasury bill (T-bill) auctions while customers accounted for 13.6 per cent. Customers' participation in Treasury bill auctions has increased slightly in recent years. In 2002–03 the 10 most active participants accounted for 91.5 per cent of amounts allotted during Treasury bill auctions (see Table 12).

**Table 12**
*T-Bill Auctions Share (Per Cent) of Amount Allotted to Participants*

| Fiscal year | PDs | Non-PDs | Customers | Top 10 participants |
|---|---|---|---|---|
| 1999–00 | 85.2 | 2.9 | 11.9 | 88.0 |
| 2000–01 | 87.6 | 1.5 | 10.9 | 92.5 |
| 2001–02 | 86.0 | 1.6 | 12.4 | 93.0 |
| 2002–03 | 84.1 | 2.2 | 13.6 | 91.5 |

Source: Bank of Canada.

### *Cash Management Bills*

In 2002–03 the 10 most active participants accounted for 95.5 per cent of amounts allotted during CMB auctions. For the same fiscal year, primary dealers accounted for 93 per cent of amounts allotted while customers accounted for 4.5 per cent (see Table 13).

**Table 13**
*CMB Auctions Share (Per Cent) of Amount Allotted to Participants*

| Fiscal year | PDs | Non-PDs | Customers | Top 10 participants |
|---|---|---|---|---|
| 1999-00 | 84.3 | 2.0 | 12.9 | 92.1 |
| 2000-01 | 92.9 | 4.5 | 2.6 | 95.6 |
| 2001-02 | 95.6 | 2.3 | 2.1 | 97.9 |
| 2002-03 | 93.0 | 2.5 | 4.5 | 95.5 |

Source: Bank of Canada.

### *Receiver General AM and PM Auctions*

Prior to September 10, 2002, the AM and PM deposit auctions were conducted on an uncollateralized basis, and Canadian financial institutions that were direct clearers in the Large Value Transfer System (LVTS) were the only eligible participants. Starting on September 10, 2002, a new collateralized framework was implemented for the AM auctions in order to strengthen the management of credit risk and increase competition by opening the auctions to a wider range of participants. No changes were made to the PM auction framework.

Since the introduction of the new framework, to the end of the 2002-03 fiscal year, the top 10 LVTS participants represent 80.9 per cent compared to 99.8 per cent for the first five month of the fiscal year. Other participants of Receiver General auctions gained 18.7 per cent of the amount allotted since the new framework has been in place (see Table 14).

**Table 14**
*Receiver General Auctions Share (Per Cent) of Amount Allotted Between LVTS and Other Participants*

| Fiscal year | Top 10 LVTS | Top 10 others |
|---|---|---|
| 1999-00 | 99.2 | - |
| 2000-01 | 97.3 | - |
| 2001-02 | 98.5 | - |
| 2002-03 | | |
| - Before Sept 10, 2002 | 99.8 | - |
| - After Sept 10, 2002 | 80.9 | 18.7 |
| - Avg. for 2002-03 | 88.8 | 10.9 |

Source: Bank of Canada.

### *Secondary Market*

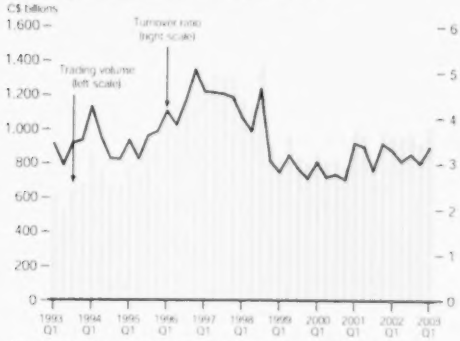
The two conventional measures for liquidity and efficiency in the Government of Canada securities market are trading volume and turnover ratio. These two measures are presented for bonds (Chart 11 and, for international comparison, Chart 15), Treasury bills (Chart 12), bond repos (Chart 13) and Treasury bill repos (Chart 14).

Trading volume, which shows the amount of securities traded per period, is a conventional indicator of liquidity. Large trading volume shows that participants can buy or sell in the marketplace without a substantial change in the price of the securities.

Turnover ratio, which is the ratio of securities traded to the securities float, is a measure of market efficiency. High turnover implies that a large amount of securities changes hands easily over a given period of time, a hallmark of an efficient securities market.

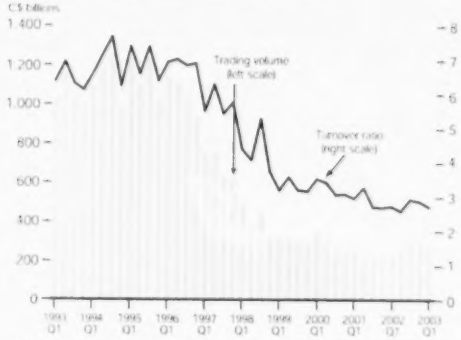
Also, the presence of liquid repo markets and liquid futures contracts characterizes an efficient market. A liquid repo market exists in the Government of Canada securities market for Treasury bills and for nominal bonds. There is also an active futures contract based on the benchmark 10-year bond (Canadian Government Bond contracts).

Chart 11
**Government of Canada Bonds**
**Trading Volume and Turnover Ratio**



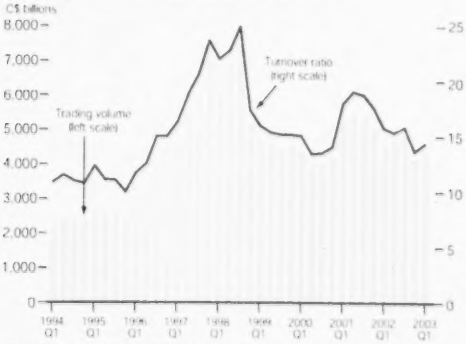

Note: Trading volume is total trading volume in each quarter. Turnover ratio is total trading volume in each quarter/stock.
Source: Bank of Canada

Chart 12
**Government of Canada Treasury Bills**
**Trading Volume and Turnover Ratio**



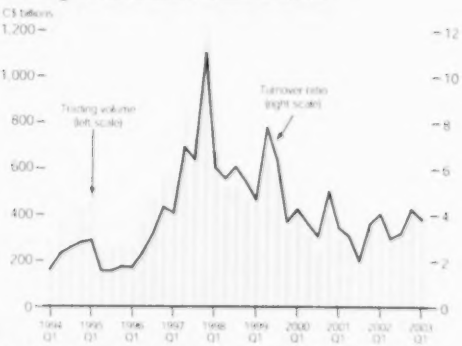

Note: Trading volume is total trading volume in each quarter. Turnover ratio is total trading volume in each quarter/stock.
Source: Bank of Canada

Chart 13
**Government of Canada Bond Repos**
**Trading Volume and Turnover Ratio**




Note: Trading volume is total trading volume in each quarter. Turnover ratio is total trading volume in each quarter/stock.
Source: Bank of Canada

Chart 14
**Government of Canada Treasury Bill Repos**
**Trading Volume and Turnover Ratio**




Note: Trading volume is total trading volume in each quarter. Turnover ratio is total trading volume in each quarter/stock.
Source: Bank of Canada

### *Market Activity*

The volume of transactions in the Government of Canada bond market has grown significantly since 1990. Total marketable bond trading volume was $3,876.6 billion in 2002-03, a 3.7-per-cent increase from 2002-03. The average quarterly turnover ratio was 3.1 times the outstanding stock of bonds in 2002-03, compared to 3.2 in 2001-02 (see Chart 11). The volume of transactions in the Treasury bill market remained at the low levels seen in recent years, as the stock of Treasury bills outstanding has fallen. In 2002-03 total Treasury bill turnover was $1,138 billion.

An active repo market is a hallmark of a well-functioning government securities market, and both Government of Canada bond repos and Treasury bill repos remained active in 2002-03. The total turnover for Government of Canada bond repos in 2002-03 was $18,126 billion, down from $20,536 billion in 2001-02. The average quarterly turnover ratio for bond repos in 2002-03 was 14.7 times compared to 17.7 times in 2001-02 (see Chart 13). The Treasury bill repo market volume in 2002-03 was $1,449 billion and the average quarterly turnover ratio was 3.5 (see Chart 14).

Futures contracts are important complements to an efficient Government of Canada securities market. In Canada the trading volume of futures contracts maintained the levels of previous years. The futures contract based on 10-year Government of Canada bonds (the Canadian Government Bond contracts or CGB contracts) continues to be actively traded, as trading volume reached 1.8 million in 2002, a 1.7-per-cent decrease from 2001. Open interest on the CGB contract as of December 31, 2003, was 63,500, in line with the open interest at the end of 2001. There is also an active market for the 3-month Canadian Bankers' Acceptance Futures (BAX contracts).

## Trading Volume by Market Participants

### *Treasury Bills*

Over the last four fiscal years, primary dealers have become the main traders in the Treasury bill secondary market and now represent 98.4 per cent of total trading volume. The 10 most active participants in the Treasury bill secondary market represent 99.5 per cent of trading activities (see Table 15).

**Table 15**
*Treasury Bill Trading Volume, Market Share (Per Cent) of Participants*

| Fiscal year | PDs | Non-PDs | Top 10 participants |
|---|---|---|---|
| 1999-00 | 96.1 | 3.9 | 96.0 |
| 2000-01 | 98.3 | 1.7 | 98.3 |
| 2001-02 | 98.3 | 1.7 | 99.4 |
| 2002-03 | 98.4 | 1.6 | 99.5 |

Source: Bank of Canada.

### *Bonds*

Primary dealers' and non-primary dealers' shares have remained fairly stable over the last four years at about 94 and 6 per cent, respectively. The 10 most active participants in the bond secondary market represent 95.9 per cent of trading activities (see Table 16).

**Table 16**
*Bonds Trading Volume, Market Share (Per Cent) of Participants*

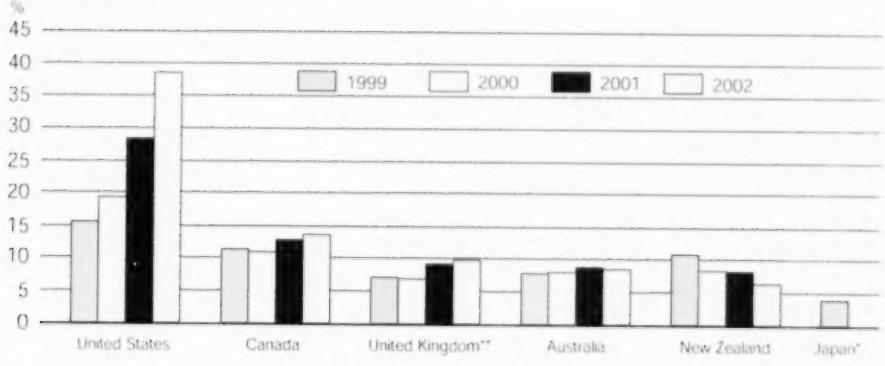
| Fiscal year | PDs | Non-PDs | Top 10 participants |
|---|---|---|---|
| 1999–00 | 92.8 | 7.2 | 91.1 |
| 2000–01 | 93.5 | 6.5 | 91.6 |
| 2001–02 | 94.0 | 6.0 | 96.0 |
| 2002–03 | 93.3 | 6.7 | 95.9 |

Source: Bank of Canada.

### *Comparison With Other Countries*

The Government of Canada bond market compares favourably with other major sovereign bond markets. The market had an annual stock turnover level in 2002 of 13.7, behind only the United States, which had a stock turnover level of 38.7 (see Chart 15).

Chart 15
**Sovereign Bond Turnover Ratios**




* Turnover data are unavailable for Japan for 2000, 2001 and 2002.

** Data for the United Kingdom do not take into account higher issuance levels of inflation-linked bonds compared to other sovereigns.

Note: Turnover ratio is total trading volume in each quarter/stock.

Sources: *Australian Financial Markets Report*, Bank of Canada, Federal Reserve Bank of New York, Japan Ministry of Finance, The Bureau of the Public Debt of the U.S., London Stock Exchange, United Kingdom Debt Management Office, Reserve Bank of New Zealand.

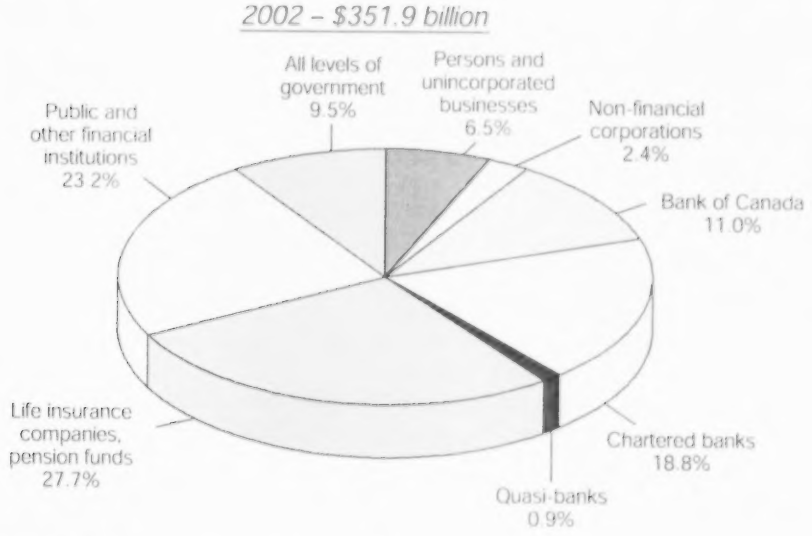
## Domestic Holdings of Government of Canada Debt

A diversified investor base helps to keep funding costs low by ensuring there is active demand for Government of Canada securities. The Government of Canada pursues diversification of its investor base by maintaining a domestic wholesale debt program that is attractive to a wide range of investors, offering a retail debt program that provides savings products to suit the needs of individual Canadians, and using a broad array of funding sources in its foreign borrowings.

In 2002 life insurance companies and pension funds accounted for the largest share of domestic holdings of Government of Canada market debt (27.7 per cent), followed by public and other financial institutions such as investment dealers and mutual funds, at 23.2 per cent (see Chart 16.) Taken together, they accounted for over 50 per cent of domestic holdings.

Reference Table IV shows the evolution of the distribution of domestic holdings of Government of Canada debt since 1976.

Chart 16
**Distribution of Domestic Holdings of Government of Canada Market Debt**


2002 – $351.9 billion
All levels of government 9.5%
Persons and unincorporated businesses 6.5%
Non-financial corporations 2.4%
Bank of Canada 11.0%
Chartered banks 18.8%
Quasi-banks 0.9%
Life insurance companies, pension funds 27.7%
Public and other financial institutions 23.2%

Source: Statistics Canada, *National Balance Sheet Accounts*.

## Canadian-Dollar Cash Balances

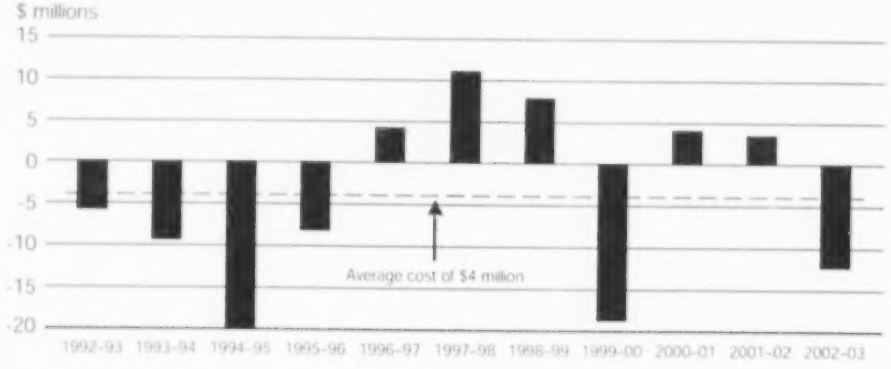
The key measure for the management of cash balances is the net return (cost paid or gain of "carry" earned) on cash balances, which fluctuate widely over the year owing to the scope of the Government's financial operations, periodic large maturities of Government of Canada bonds, the operations of the Bank of Canada and changes in market conditions.

The yield spread earned or carry paid by the Government is the difference between the return on government balances auctioned to financial institutions (typically around the overnight rate) and the average yield paid on Treasury bills. The cost of carry depends on the shape of the yield curve. A normal upward sloping yield curve, which has a positive interest rate spread between the rate at which the Government invests its cash and the rate at which it borrows, results in a cost of carry, as financial institutions pay rates of interest for government deposits based on an overnight rate that is lower than the rate paid by the Government to borrow funds. Conversely, under an inverted yield curve, short-term deposit rates are higher than 3- to 12-month Treasury bill rates, which can result in a net gain for the Government.

In 2002–03 the financial impact of holding Receiver General cash balances was a net cost of $12.4 million, compared to a net gain of $3.5 million for the prior fiscal year (see Chart 17). The change from gain to cost was due to shifts in the short-end of the yield curve from an inverted to a more normal upward sloping shape. This shift occurred in the last quarter of 2001–02 and persisted in 2002–03.

Chart 17

**Cost (-) or Gain (+) of Carry for Cash Balances**




Source: Bank of Canada

### Funding and Investment of Reserves

The main measures in the area of the funding and investment of reserves are the costs of the liabilities and the cost of carry on the asset/liability portfolio.

*Liability Costs:* In 2002–03 the sources of reserve funding were Canada bills and cross-currency swaps. Canada bills were issued, on average, at an all-in cost of US$LIBOR less 15-20 basis points—generally in line with funding levels of recent years.

In the case of cross-currency swaps, costs are measured in floating-rate terms (LIBOR). On average, in 2002–03, the Government raised floating-rate "swap funds" at US$LIBOR less 35 basis points, in line with recent years.

#### *Carry*

The carry on the foreign reserves is currently assessed by subtracting the interest paid on Canada's foreign currency liabilities from interest earned on the reserve assets (i.e., the net interest earned or paid) and expressing this value as a percentage of total assets held (see the 2002 *Annual Report to Parliament on the Operations of the Exchange Fund Account*, available at www.fin.gc.ca, for further information). The carry of the total Exchange Fund Account portfolio in 2002–03 is estimated at +1.5 basis points compared to zero basis points in 2001–02. In other words, the Government was able to hold reserves without incurring a cost to the taxpayer.

### *External Evaluations of Fund Management Policies and Activities*

A means used by the Government to assess fund management effectiveness is program evaluation. The Department of Finance uses an external evaluation process to assess policies and operational decisions in the area of fund management in order to inform future decision making and contribute to public transparency and good governance. Independent evaluators are contracted to carry out the evaluations.

Two evaluations were undertaken in 2002–03, focusing on reserves management and the bond buyback program.

The evaluation of reserves management[3] looked at the program's objectives, roles and responsibilities and the costs and risks involved in the program. The evaluator noted the program compares well with that of other similar sovereigns. The main recommendation of the evaluation dealt with issues of risk management and performance measurement. The Department was largely in agreement with the recommendations, noting that work on improving performance measurement is underway.

[3] "External Review of the Reserves Management Framework (2002)," available upon request from the Financial Markets Division, Department of Finance.

The evaluation of the bond buyback program[4] looked at the value and effectiveness of the program and its impact on the debt program, secondary markets and market participants. The evaluator noted the program has been successful and enjoys the support of market participants. The main recommendations dealt with issues such as the need to keep apprised of developments in other sovereigns and the benefits of working with market participants, particularly with respect to the selection of bonds to be targeted for future buyback operations. The departmental response was again favourable, noting that it monitors developments in the borrowing programs of other sovereigns and maintains a dialogue with market participants.

[4] "Evaluation of the Bond Buyback Program (2003)," available upon request from the Financial Markets Division, Department of Finance.

## Annex 1 – Managing the Debt Structure

This section describes the measures of the debt structure that the Government uses and presents the main analytical techniques and results supporting the decision to lower the fixed-rate share over five years, as announced in the February 2003 budget and subsequent 2003–04 *Debt Management Strategy*.

### Measures of Debt Structure

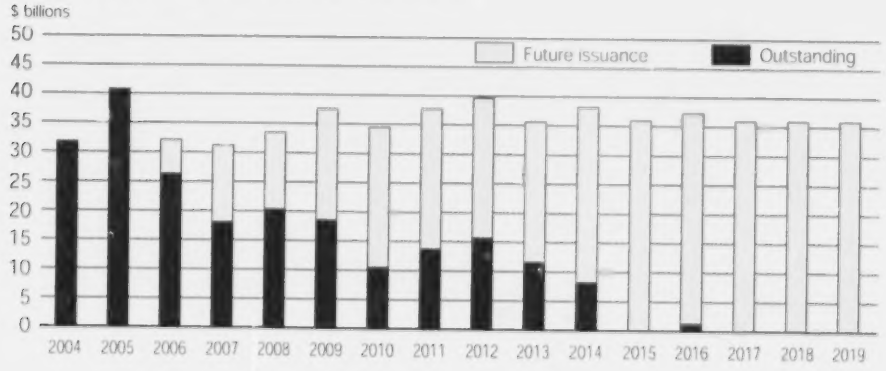
Debt managers commonly use a variety of indicators to characterize the composition of the debt and indicate how much of or how often the debt structure is exposed to interest rate variations.

***Fixed-rate share:*** The fixed-rate share of the debt is computed as the proportion of interest-bearing debt having fixed rates—debt that does not mature or need to be re-priced within a year—relative to the total interest-bearing debt stock. The fixed-rate share has been used as the main operational target for a number of years, as it is intuitive and easy to compute.

***Maturity profile:*** The Government monitors the maturity profile of the debt (i.e., the amount that matures, or comes due, in any given year) to limit its future refinancing risk. A well-distributed maturity profile reduces the risk that a relatively large proportion of the debt will mature and need to be refinanced in a period of higher interest rates.

The maturity profile of domestic government bonds is shown in Chart A1. Initiatives to regularize bond refinancing into predictable benchmark securities have led to a gradual smoothing out of the maturity profile of the bond stock. The recent adjustment of the size of the 10-year benchmark to maintain an annual benchmark cycle will contribute to maintaining a stable maturity profile in the future. The use of cash management buybacks also helps to reduce peaks in maturities within a year.

Chart A1
**Maturity Profile of Domestic Bonds**



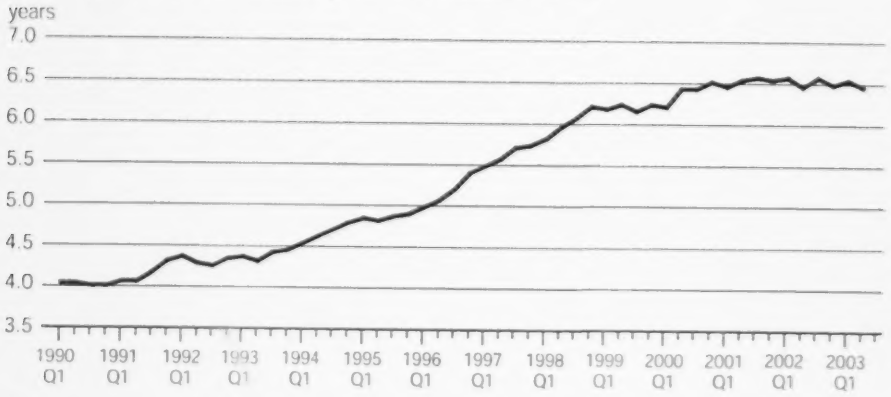

Note: Outstanding bonds as of March 2003. Projections assume future issuance remains near 2002–03 levels and excludes buybacks.

Source: Department of Finance

*Average term to maturity:* The average term to maturity (ATM) is the average lifespan, measured in years, of the marketable instruments that make up the debt. ATM represents the average length of time before debt instruments mature and become subject to refinancing risk. A longer ATM means that debt instruments are rolled over less frequently, which implies less uncertainty regarding future debt costs.

The average term to maturity of marketable debt has stabilized at around 6½ years in recent years, having increased from roughly 4 years in 1990 (see Chart A2). With the announced change in debt structure, average term to maturity is expected to remain near current levels.

Chart A2
**Average Term to Maturity of Marketable Debt**




Source: Bank of Canada

*Duration:* Duration is another measure of the average length of time before refinancing risk occurs and is widely used by other sovereign issuers. While ATM tracks only the time when the principal is repaid, duration considers the time value of all expected cash flows (coupon payments and principal repayments) through the life of debt instruments. From an issuer's perspective, a longer duration is associated with lower refinancing risk. At the end of March 2003, the Government's marketable debt had a duration of 4.5 years.[5]

[5] Duration is calculated according to the modified duration formula, and includes the effect of cross-currency and interest-rate swaps.

### Analytical Techniques and Results

The primary goal of the analysis in 2002 was to assess whether a change in debt structure is appropriate, in light of recent improvements in the fiscal and macroeconomic environment. The risk and cost profiles of the two-thirds fixed-rate debt structure were compared with structures having a fixed-rate share that is 5 and 10 per cent lower. Results indicate cost savings could be expected over time by lowering the fixed-rate share, and risk exposure would be kept within tolerable risk levels. In light of these findings, the Government decided to lower the fixed-rate share target from two-thirds to 60 per cent over five years.

Stochastic simulation, based on the simulation of debt costs for a large number of interest rate scenarios, was used to assess the balance between the costs and risks of alternative debt structures. The Government takes a long-term strategic view in choosing a target debt structure to have reasonable and lasting cost stability under a range of potential interest rate environments. The decision to change the fixed-rate share target is not based on a particular interest rate outlook.

The analysis showed that a lower fixed-rate share would provide cost savings over a medium-term horizon and would not increase risk beyond that tolerated in the budgetary framework. Under either debt structure, there was a high degree of certainty (95 per cent probability) that debt costs in the next year would be within the Government's risk tolerance.

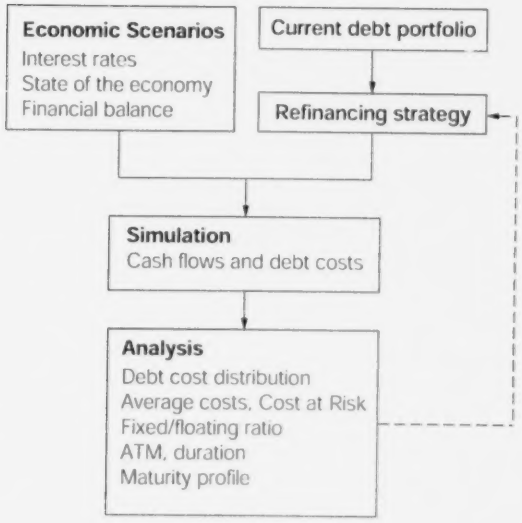
Compared to the current two-thirds debt structure, a lower fixed-rate structure is more exposed to adverse movements in interest rates. For example, a 100-basis-point increase in interest rates along the entire yield curve would raise net federal debt-servicing costs by $1.1 billion in the first year with a 60-per-cent fixed-rate structure, compared to $800 million for a two-thirds debt structure. By comparison, the impact of the same interest rate shock was estimated at $1.8 billion in the mid-1990s owing to a high debt level and an even lower fixed-rate share.

However, the analysis indicates that it is unlikely that the additional debt costs stemming from a severe interest rate shock would be disruptive to the budgetary framework. Over time, the additional costs resulting from an interest rate shock would be more than offset by the savings associated with a lower fixed-rate structure.

### *Modelling Framework*

The model used for the analysis is illustrated in Figure A1. In addition to data on the existing debt and assumptions on future debt evolution, a large number of economic scenarios are generated (see box below) and an issuance strategy is designed. Cash flows and debt costs are then simulated for each scenario and results are extracted. The process is finally repeated for alternative financing strategies.

Figure A1
**Debt Strategy Framework**



### *Interest Rate Scenarios*

Uncertainty surrounding future interest rates is the main source of risk in managing the Government's debt portfolio. Any empirical modelling of future debt charges requires future interest rate scenarios. Moreover, the quality of the analysis depends on the plausibility of the scenarios.

The term structure model used to develop scenarios is the two-factor Cox-Ingersoll-Ross (CIR) model[6]. The generated term structures take the various shapes observed historically: upward sloping, inverted and humped. The model is able to reproduce the general shape of the empirical average yield curves.

For the analysis, the model parameters have been selected to reproduce characteristics of interest rates observed over the 1994–2002 period. It is therefore assumed that the interest rate environment that prevailed over that period will continue over the next 10 years. It should be noted that the choice of the historical period is critical and, inevitably, subjective.

The CIR model is used to produce 10,000 term structure paths for a 10-year horizon. To summarize the properties of the generated interest rate scenarios, the sample mean and volatility of the 3-month and 10-year rates are presented in Table A1. The spread between 3-month and 10-year rates for the generated scenarios remains generally between 0 and 4 per cent, with an average of about 1.8 per cent, matching what was observed over the 1994–2002 period.

**Table A1**
*Generated Interest Rate Scenarios Statistics*

| | Average | Volatility | 95% range in year 5 |
|---|---|---|---|
| 3-month | 4.8% | 0.5% | 2.5 to 8.0% |
| 10-year | 6.6% | 0.3% | 4.5 to 10.2% |

Source: Department of Finance.

Experience has shown that results of the stochastic analysis are highly dependent on the interest rate model and the parameters used. While progress has been accomplished at improving the interest rate model, more work is required to ensure that the model captures adequately all dimensions of observed interest rate dynamics and that generated scenarios are realistic.

[6] See end of Annex 1 for more information on the CIR model.

### *Stochastic Analysis*

The first technique employed is based on the simulation of a large number of future interest rate scenarios and the examination of their implications for debt costs. The statistical distribution of debt costs (see Figure A2) is compared for the three different debt structures.

Figure A2
**Debt Cost Distribution**

Cost at Risk (CaR) is one of the main tools used to present and interpret results of stochastic simulations. This measure is similar to the well-known Value at Risk measure used extensively throughout the financial community, but is based on debt costs rather than marked-to-market values. CaR is a measure based on the statistical distribution of debt charges that enables risk to be quantified in terms of the maximum costs that could occur with a 95-per-cent probability in a particular year. A number of useful variants in the definition are presented in Table A2.

**Table A2**
*Cost at Risk Concepts*

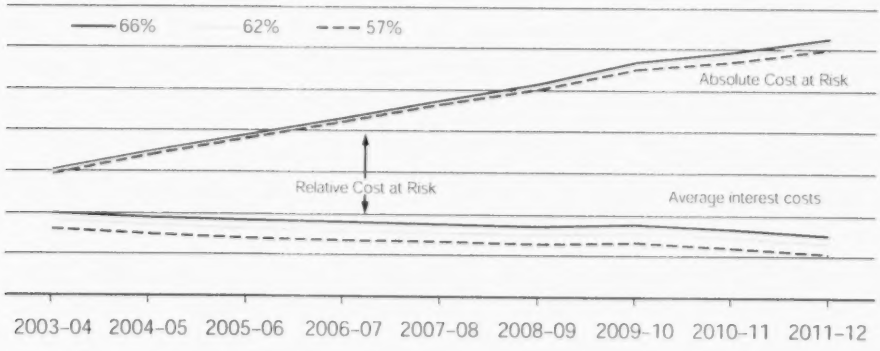
| Measure | Interpretation |
|---|---|
| Absolute Cost at Risk | Maximum costs expected with a 95-per-cent probability. |
| Relative Cost at Risk | Maximum **increase** over average in-debt costs expected with a 95-per-cent probability. |
| Time-conditional Cost at Risk | Maximum unexpected increase in costs that is expected with a 95-per-cent probability, **from one year to the next**. |

Results of the analysis are illustrated in Chart A3. As expected, average debt costs decline when the proportion of long-term bonds is decreased in the debt portfolio. Cost savings could be realized over the long term by reducing the fixed-rate share by 5 or 10 per cent.

The relative CaR measure is attractive to gauge risk because it can be directly compared to the level of prudence incorporated in the budget framework to analyze the risk that an unexpected increase in debt costs disrupts the budget plan. In other words, an appropriate debt structure could require that relative CaR remain inside the Government's risk tolerance limit.

Relative CaR rises when the fixed/floating ratio is decreased. A lower debt structure is slightly more sensitive to interest rate volatility. All three debt structures are highly likely to contain increases in debt costs without disrupting the budget plan over a one-year horizon.

Chart A3
**Cost at Risk Results**




From an economic perspective, absolute CaR may be more relevant, as it focuses on the potential level of costs instead of the risk of deviation from an average. Absolute CaR gives the maximum level of debt charges with a 95-per-cent probability; that is, there would be only a 5-per-cent chance that debt charges exceed the absolute CaR in a given year. When comparing two debt structures, absolute CaR considers the difference in expected debt costs in addition to risk as defined by relative CaR. This can be seen as a risk-adjusted measure of cost.

As shown in Chart A3, absolute CaR for the three debt structures is very similar. In other words, the risk that debt costs exceed the absolute CaR lines is virtually the same for each debt structure, while there is a potential for lower costs for the 62-per-cent and 57-per-cent debt structures. Lower running costs for these structures fully offset the increased relative CaR.

The farther out into the future they are forecast, the greater the uncertainty surrounding the level of debt charges. This results in an increasing relative CaR over years, as the proportion of debt refinanced at unknown interest rates rises.

While this is in the nature of long-term forecasts, it renders difficult the interpretation of results beyond a one- or two-year horizon. With time-conditional CaR, the horizon is fixed to one year by examining risk in a particular year using the year before as the basis, rather than the start of the simulation. This facilitates interpretation and improves the comparability of risk across years, particularly when the structure or the size of the portfolio changes. This is also consistent with the fiscal-planning process, where a new budget is prepared every year, based on updated forecasts in light of developing economic conditions. The time-conditional CaR is computed by obtaining the statistical distribution of changes in debt costs for each year. The difference between the 95th percentile and the mean for each individual year represents the maximum unexpected increase in costs that is expected with a 95-per-cent probability.

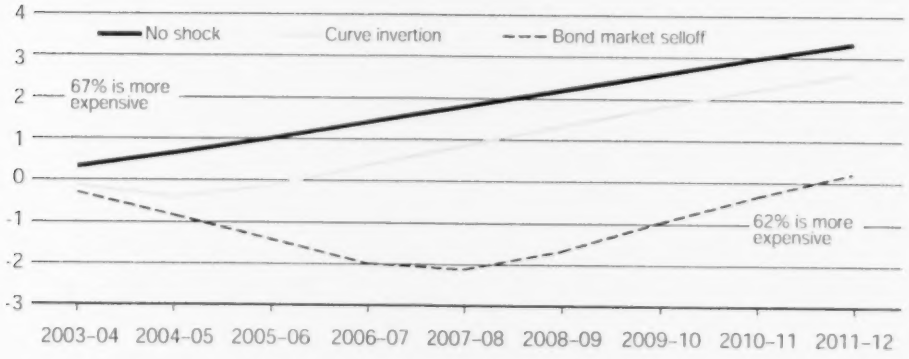
### *Stress Testing*

Experience has shown that quantitative results of stochastic simulations are very sensitive to assumptions employed for the dynamics of interest rates. Quantitative results thus need to be interpreted with caution. In addition, the technique may not capture adequately more extreme events. Therefore, scenario analysis remains an important tool to evaluate the impact of specific shocks on debt costs. In particular, stress testing allows considering worst-case scenarios (events that are highly unlikely but still possible). While it is not possible to determine exactly what would be the characteristics of such shocks or their probability, results provide useful insight to complement the stochastic analysis. Stress testing allows, in particular, the consideration of severe shocks on interest rates that could occur in periods of instability in financial markets.

A shock similar to the 1994 bond market selloff (in which 3-month rates increase by 5 per cent and 10-year rates rise by 2 per cent over a 15-month period, before gradually settling back to their previous level) would have a significant impact on debt costs for all three structures considered. But severe shocks can more easily be managed within the fiscal framework in the short run with a higher fixed-rate structure. The 62-per-cent and 57-per-cent debt structures would become marginally more expensive than the current two-thirds structure for a three-year period, but the advantage disappears over a longer-term horizon as the shock dissipates.

Chart A4 presents cumulative cost differences between the two-thirds structure and the 62-per-cent structure. Savings would accumulate quickly in the absence of interest rate shocks. Savings would be slightly negative in the event of the bond market selloff scenario, but quickly turn back into positive territory after three years. It would take a severe inversion that persists for a long period (e.g., the 3-month rate jumps by 6 per cent and the 10-year rate increases by 2 per cent over a 6-month period, and both rates remain at those levels for three years before abating back to their historical average over the following 2½ years) to make the higher debt structure attractive over a longer-term horizon, as illustrated by the severe curve inversion.

Chart A4
**Cumulative Cost Differences Between 66% and 62%**




In summary, only if unfavourable shocks of the magnitude of the bond market selloff occur on a frequent basis or if more severe shocks occur would the benefits of a two-thirds debt structure outweigh the higher running costs over the long term.

**For more information on evaluating the debt structure ...**

A number of working papers have been released to illustrate some of the techniques being developed by debt managers to evaluate the debt structure. Interested readers are invited to consult the papers, noting that working papers present work-in-progress and do not reflect official positions of the Department of Finance or the Bank of Canada.

The two-factor Cox-Ingersoll-Ross model used to develop interest rate scenarios is described in Bolder, D. J. (2001) "Affine Term-Structure Models: Theory and Implementation," Bank of Canada, Working Paper 2001-15, www.bankofcanada.ca/en/res/wp01-15.htm.

A simulation framework to explore a large number of financing strategies, using an enhanced scenario model, has been developed. Illustrative results, along with further refinements in simulation techniques and a discussion on risk measures, are presented in Bolder, D. J. (2003) "A Stochastic Simulation Framework for the Government of Canada's Debt Strategy," Bank of Canada, Working Paper 2003-10, www.bankofcanada.ca/en/res/2003/wp03-10.htm.

The role that debt management decisions might have in fiscal planning is discussed in Georges, P. (2003) "Borrowing Short- or Long-Term: Does the Government Really Face a Trade-off?," Department of Finance, Working Paper 2003-16, www.fin.gc.ca/wp/2003-16e.html.

*Annex 2*

## Glossary

**Bank Rate:** The minimum rate at which the Bank of Canada extends short-term advances to members of the Canadian Payments Association.

**basis point:** One-hundredth of a percentage point (0.01 per cent).

**benchmark bond:** Specific issue outstanding within each class of maturities. It is considered by the market to be the standard against which all other bonds issued in that class are evaluated.

**bid:** Price a buyer is willing to pay.

**bid-offer spread:** The difference between bid and offer prices. It is typically measured in basis points (hundredths of a per cent).

**budgetary surplus:** Occurs when government annual revenues exceed annual budgetary expenditures. A deficit is the shortfall between government revenues and budgetary expenditures.

**Canada Premium Bond:** A non-marketable security instrument issued by the Government of Canada, which is redeemable once a year on the anniversary date or during 30 days thereafter without penalty.

**Canada Savings Bond:** A non-marketable security instrument issued by the Government of Canada, which is redeemable on demand by the registered owner(s), and which, after the first three months, pays interest up to the end of the month prior to cashing.

**Canadian Payments Association:** A non-profit association created by an Act of Parliament in 1980 to establish and operate a national system for the clearing and settlement of cheques, electronic funds transfers and other payment items, and to plan the evolution of the national payments system.

**cash management:** Control by the Bank of Canada of settlement balances through increases or decreases in the amount supplied to Large Value Transfer System participants in relation to the amount demanded in order to reinforce the Target for the Overnight Rate.

**compound interest bond; C-bond:** A Canada Savings Bond or Canada Premium Bond on which interest accrues and is compounded annually to maturity or until redeemed.

**Exchange Fund Account:** A fund maintained by the Government of Canada for the purpose of promoting order and stability of the Canadian dollar in the foreign exchange market. This function is fulfilled by purchasing foreign exchange (selling Canadian dollars) when there is upward pressure on the value of the Canadian dollar and selling foreign exchange (buying Canadian dollars) when there is downward pressure on the currency.

**financial requirement/source:** Measures the difference between the cash coming in to the Government and the cash going out. In the case of a financial requirement, it is the amount of new borrowing required from outside lenders to meet the Government's financing needs in any given year.

**foreign exchange reserves:** Stocks of foreign exchange assets (e.g., interest-earning bonds) held by sovereign states to support the value of the domestic currency. Canada's foreign exchange reserves are held in a special account called the Exchange Fund Account.

**Government of Canada securities auction:** A process used for selling Government of Canada debt securities (mostly marketable bonds and Treasury bills) in which issues are sold by public tender to government securities distributors.

**government securities distributors:** The Government distributes Government of Canada Treasury bills and marketable bonds through a group of investment dealers and banks. The members of this group are called government securities distributors.

**gross public debt:** Total amount the Government owes. It consists of both market debt in the form of outstanding securities such as Treasury bills and Canada Savings Bonds, internal debt owed mainly to the superannuation fund for government employees, and other current liabilities.

**inflation:** A persistent rise over time in the average price of goods and services.

**interest-bearing debt:** Unmatured debt, or market debt, and the Government's liabilities to internally held accounts such as federal employees' pension plans.

**Large Value Transfer System; LVTS:** A Canadian Payments Association electronic system for the transfer of large-value or time-critical payments.

**market debt:** For debt management purposes, market debt is defined as the portion of debt that is funded in the public markets, and consists of marketable bonds, Treasury bills, retail debt (primarily Canada Savings Bonds), foreign currency denominated bonds and bills, as well as bonds issued to the Canada Pension Plan.

**marketable bond:** A Canadian government debt security that is non-cashable prior to maturity, but whose ownership may be transferred from one holder to another on the open market.

**marketable debt:** Market debt that is issued by the Government of Canada and sold via public tender or syndication. These issues can be traded between investors while outstanding.

**monetary policy:** A policy that seeks to improve the performance of the economy by regulating money supply and credit.

**money market:** The market in which short-term capital is raised, invested and traded using financial instruments such as Treasury bills, bankers' acceptances, commercial paper, and bonds maturing in one year or less.

**net public debt:** Consists of gross public debt net of financial assets.

**non-market debt:** Consists of the Government's internal debt, which is, for the most part, federal public sector pension liabilities and the Government's current liabilities (such as accounts payable, accrued liabilities, interest and payment of matured debt).

**non-marketable debt:** Market debt that is not tradable and that is issued to retail investors (Canada Savings Bonds and Canada Premium Bonds).

**offer:** Price at which a seller is willing to sell.

**overnight rate; overnight financing rate; overnight money market (financing) rate; overnight lending rate:** The rate at which major participants in the money market borrow and lend one-day funds to each other.

**primary dealers:** The core group of government securities distributors that maintain a certain threshold of activity in the market for Government of Canada securities. The primary dealer classification can be attained in either Treasury bills or marketable bonds, or both.

**primary market:** The market in which securities are initially sold or offered.

**regular interest bond; R-bond:** A Canada Savings Bond or Canada Premium Bond on which interest is paid annually by cheque or by direct deposit to maturity or until the bond is redeemed.

**repo; repurchase agreement:** A transaction in which a party sells a security and simultaneously agrees to repurchase it at a given price after a specified time.

**sale and repurchase agreement; SRA:** A transaction in which the Bank of Canada offers to sell Government of Canada securities to designated counterparties with an agreement to buy them back at a predetermined price the next business day; used to reinforce the Target for the Overnight Rate.

**secondary market:** The market in which previously issued securities are traded, as distinguished from the new issue or primary market.

**special purchase and resale agreement; special PRA; SPRA:** A transaction in which the Bank of Canada offers to purchase Government of Canada securities from designated counterparties with an agreement to sell them back at a predetermined price the next business day; used to reinforce the Target for the Overnight Rate.

**Target for the Overnight Rate:** The Bank of Canada's key policy interest rate. It serves as a signal to major participants in the money market as to what rate the Bank is aiming for in the market for overnight funds.

**term structure of interest rates:** The levels of interest rates from short- to long-term maturities.

**turnover ratio:** Volume of securities traded as a percentage of securities outstanding.

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## Reference Tables


I Gross Public Debt, Outstanding Market Debt and Debt Charges ..... 71

II Government of Canada Outstanding Market Debt ..... 72

III Average Weekly Domestic Market Trading in Government of Canada Securities, April 2002 to March 2003 ..... 73

IV Distribution of Domestic Holdings of Government of Canada Securities ..... 74

V Non-Resident (Direct) Holdings of Government of Canada Debt ..... 80

VI Fiscal 2002–03 Treasury Bill Program ..... 81

VII Fiscal 2002–03 Treasury Bill Auction Results ..... 83

VIII Fiscal 2002–03 Canadian-Dollar Marketable Bond Program ..... 84

IX Fiscal 2002–03 Marketable Bond Auction Results ..... 86

X Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2003 ..... 87

XI Government of Canada Swaps Outstanding as at March 31, 2003 ..... 89

XII Bond Buyback Program—Operations 2002–03 ..... 94

XIII Canada Savings Bonds and Canada Premium Bonds, Fiscal 1983–84 to Fiscal 2002–03 ..... 99

XIV Crown Corporation Borrowings as at March 31, 2003 ..... 100

## Reference Table I

*Gross Public Debt, Outstanding Market Debt and Debt Charges*

| Fiscal years ending March 31 | Gross public debt | | | | Outstanding market debt | | | |
|---|---|---|---|---|---|---|---|---|
| | Outstanding | Fixed-rate portion[1] | Average fixed-rate portion[2] | Total debt charges | Outstanding | Fixed-rate portion | Total debt charges | Average interest rate |
| | ($ billions) | (%) | (%) | ($ billions) | ($ billions) | (%) | ($ billions) | (%) |
| 1985-86 | 321.5 | 51.9 | 0 | 27.7 | 201.2 | 36.7 | 20.7 | 10.66 |
| 1986-87 | 357.2 | 50.9 | 0 | 28.7 | 228.6 | 36.9 | 21.5 | 9.34 |
| 1987-88 | 390.3 | 51.2 | 0 | 31.2 | 250.8 | 38.2 | 23.1 | 9.61 |
| 1988-89 | 423.8 | 49.6 | 0 | 35.5 | 276.3 | 37.2 | 26.5 | 10.82 |
| 1989-90 | 451.8 | 49.9 | 0 | 41.2 | 294.6 | 38.1 | 31.4 | 11.20 |
| 1990-91 | 490.3 | 50.4 | 0 | 45.0 | 323.9 | 38.5 | 34.3 | 10.72 |
| 1991-92 | 526.9 | 50.7 | 0 | 43.9 | 351.9 | 38.9 | 32.4 | 8.86 |
| 1992-93 | 566.0 | 50.4 | 0 | 41.3 | 382.7 | 39.0 | 29.4 | 7.88 |
| 1993-94 | 610.7 | 53.3 | 0 | 40.1 | 414.0 | 42.7 | 28.0 | 6.75 |
| 1994-95 | 651.6 | 55.1 | 0 | 44.2 | 441.0 | 44.4 | 31.4 | 7.97 |
| 1995-96 | 694.6 | 56.9 | 0 | 49.4 | 469.5 | 47.9 | 35.3 | 7.34 |
| 1996-97 | 711.9 | 61.7 | 0 | 47.3 | 476.9 | 53.8 | 33.0 | 6.66 |
| 1997-98 | 713.4 | 63.7 | 0 | 43.1 | 467.3 | 56.8 | 31.0 | 6.64 |
| 1998-99 | 717.7 | 64.5 | 66.6 | 43.3 | 460.4 | 58.5 | 30.8 | 6.70 |
| 1999-00 | 716.3 | 66.5 | 66.6 | 43.4 | 456.4 | 59.1 | 30.5 | 6.15 |
| 2000-01 | 715.0 | 67.8 | 67.6 | 43.9 | 446.4 | 60.5 | 30.7 | 6.11 |
| 2001-02 | 704.3 | 67.4 | 67.6 | 39.7 | 442.3 | 60.1 | 27.4 | 5.56 |
| 2002-03 | 700.1 | 65.8 | 65.8 | 37.3 | 439.8 | 61.2 | 25.2 | 5.32 |

[1] For interest-bearing debt as of March 31. Calculation methodology may vary slightly from year to year. The definition of interest-bearing debt has changed slightly in 2002-03 to reflect the adoption of the full accrual basis of accounting.

[2] Average over the year. Comparative figures for prior years are not available.

Sources: *Public Accounts of Canada*, *Bank of Canada Review*, Department of Finance estimates.

## Reference Table II

*Government of Canada Outstanding Market Debt*

| Fiscal years ending March 31 | Payable in Canadian dollars | | | | | Payable in foreign currencies | | | | | | Total market debt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Treasury bills | Marketable bonds | Retail debt | CPP bonds | Total | Marketable bonds | Canada Bills | Canada Notes[1] | Standby drawings | Term loans | Total | |
| | (C$ millions) | | | | | | | | | | | |
| 1977–78 | 11,295 | 21,645 | 18,036 | 84 | 51,060 | 181 | 0 | 0 | 850 | 0 | 1,031 | 51,664 |
| 1978–79 | 13,535 | 26,988 | 19,443 | 96 | 60,062 | 3,319 | 0 | 0 | 2,782 | 1,115 | 7,216 | 66,640 |
| 1979–80 | 16,325 | 33,387 | 18,182 | 113 | 68,007 | 3,312 | 0 | 0 | 359 | 1,030 | 4,701 | 72,021 |
| 1980–81 | 21,770 | 40,976 | 15,966 | 136 | 78,848 | 3,236 | 0 | 0 | 355 | 1,046 | 4,637 | 83,138 |
| 1981–82 | 19,375 | 43,605 | 25,108 | 154 | 88,242 | 3,867 | 0 | 0 | 0 | 550 | 4,417 | 93,167 |
| 1982–83 | 29,125 | 48,473 | 32,753 | 171 | 110,522 | 4,872 | 0 | 0 | 0 | 362 | 5,234 | 116,562 |
| 1983–84 | 41,700 | 56,976 | 38,403 | 189 | 137,268 | 4,306 | 0 | 0 | 510 | 398 | 5,214 | 142,901 |
| 1984–85 | 52,300 | 69,354 | 42,167 | 205 | 164,026 | 4,972 | 0 | 0 | 1,909 | 1,172 | 8,053 | 172,719 |
| 1985–86 | 61,950 | 81,163 | 44,607 | 445 | 188,165 | 9,331 | 0 | 0 | 2,233 | 2,247 | 13,811 | 201,229 |
| 1986–87 | 76,950 | 94,520 | 43,854 | 1,796 | 217,120 | 9,120 | 1,045 | 0 | 0 | 2,047 | 12,212 | 228,611 |
| 1987–88 | 81,050 | 103,899 | 52,558 | 2,492 | 239,999 | 8,438 | 1,045 | 0 | 0 | 2,257 | 11,740 | 250,809 |
| 1988–89 | 102,700 | 115,748 | 47,048 | 3,005 | 268,501 | 6,672 | 1,131 | 0 | 0 | 934 | 8,737 | 276,301 |
| 1989–90 | 118,550 | 127,681 | 40,207 | 3,072 | 289,510 | 4,364 | 1,446 | 0 | 0 | 0 | 5,810 | 294,562 |
| 1990–91 | 139,150 | 143,601 | 33,782 | 3,492 | 320,025 | 3,555 | 1,008 | 0 | 0 | 0 | 4,563 | 323,903 |
| 1991–92 | 152,300 | 158,059 | 35,031 | 3,501 | 348,891 | 3,535 | 0 | 0 | 0 | 0 | 3,535 | 351,885 |
| 1992–93 | 162,050 | 178,436 | 33,884 | 3,505 | 377,875 | 2,926 | 2,552 | 0 | 0 | 0 | 5,478 | 382,741 |
| 1993–94 | 166,000 | 203,373 | 30,866 | 3,497 | 403,736 | 5,019 | 5,649 | 0 | 0 | 0 | 10,668 | 413,975 |
| 1994–95 | 164,450 | 225,513 | 30,756 | 3,488 | 424,207 | 7,875 | 9,046 | 0 | 0 | 0 | 16,921 | 440,998 |
| 1995–96 | 166,100 | 252,411 | 30,801 | 3,478 | 452,790 | 9,514 | 6,986 | 310 | 0 | 0 | 16,810 | 469,547 |
| 1996–97 | 135,400 | 282,059 | 32,911 | 3,468 | 453,838 | 12,460 | 8,436 | 2,121 | 0 | 0 | 23,017 | 476,852 |
| 1997–98 | 112,300 | 293,987 | 30,302 | 3,456 | 440,045 | 14,590 | 9,356 | 3,176 | 0 | 0 | 27,122 | 467,291 |
| 1998–99 | 96,950 | 294,914 | 28,810 | 4,063 | 424,737 | 19,655 | 10,171 | 6,182 | 0 | 0 | 36,008 | 460,427 |
| 1999–00 | 99,850 | 293,250 | 27,115 | 3,427 | 423,642 | 21,464 | 6,008 | 5,168 | 0 | 0 | 32,640 | 456,406 |
| 2000–01 | 88,700 | 293,879 | 26,457 | 3,404 | 412,440 | 20,509 | 7,228 | 5,695 | 0 | 0 | 33,432 | 445,724 |
| 2001–02 | 94,200 | 292,910 | 24,229 | 3,386 | 414,725 | 19,652 | 3,355 | 4,405 | 0 | 0 | 27,412 | 442,137 |
| 2002–03 | 104,600 | 286,289 | 22,878 | 3,369 | 417,136 | 14,412 | 2,603 | 4,533 | 0 | 0 | 21,548 | 436,684 |

Note: Subcategorization of Government of Canada debt is in accordance with Bank of Canada reports, which may vary slightly from Public Accounts categories due to differences in classification methods. The total outstanding market debt may not equal the sum of the parts due to slight differences between the Bank of Canada's and Department of Finance's numbers.

[1] Includes EMTNs.

Sources: *Bank of Canada Review*, Department of Finance.

**Reference Table III**

*Average Weekly Domestic Market Trading in Government of Canada Securities, April 2002 to March 2003*

| | | Marketable bonds | | | | | |
|---|---|---|---|---|---|---|---|
| | Treasury bills | 3 years and under | 3 to 10 years | Over 10 years | Real return bonds | Total marketable bonds | Total |
| | | | | ($ millions) | | | |
| April 2002 | 20,488 | 27,240 | 31,334 | 9,985 | 102.38 | 68,661 | 89,149 |
| May 2002 | 18,392 | 31,613 | 32,566 | 10,144 | 96 | 74,419 | 92,811 |
| June 2002 | 22,640 | 34,571 | 33,222 | 6,638 | 404.53 | 74,835 | 97,475 |
| July 2002 | 23,202 | 33,049 | 35,059 | 6,929 | 188.28 | 75,225 | 98,428 |
| August 2002 | 20,063 | 36,767 | 37,578 | 6,182 | 248.73 | 80,776 | 100,840 |
| September 2002 | 25,044 | 33,727 | 32,021 | 5,801 | 325 | 71,874 | 96,918 |
| October 2002 | 24,558 | 30,153 | 37,050 | 6,238 | 427.02 | 73,867 | 98,425 |
| November 2002 | 22,028 | 32,099 | 42,387 | 8,675 | 290.73 | 83,451 | 105,479 |
| December 2002 | 21,298 | 23,963 | 24,317 | 5,028 | 247.63 | 53,555 | 74,853 |
| January 2003 | 20,102 | 28,461 | 26,447 | 6,099 | 302.46 | 61,310 | 81,412 |
| February 2003 | 21,958 | 39,075 | 37,891 | 8,311 | 349.53 | 85,626 | 107,584 |
| March 2003 | 23,136 | 42,211 | 42,618 | 9,038 | 766 | 94,633 | 117,769 |

Source: Bank of Canada, *Banking and Financial Statistics*.

**Reference Table IV**

*Distribution of Domestic Holdings of Government of Canada Securities*

PART A —Treasury Bills, Canada Bills, Bonds,[1] Canada Savings Bonds and Canada Premium Bonds

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasi-banks[2] | Life insurance companies and pension funds | Public and other financial institutions[3] | All levels of government[4] | Total[5] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | ($ millions) | | | | |
| 1976 | 17,932 | 395 | 8,242 | 8,666 | 716 | 1,436 | 2,273 | 730 | 40,390 |
| 1977 | 20,277 | 321 | 10,268 | 9,601 | 1,048 | 2,271 | 3,114 | 1,014 | 47,914 |
| 1978 | 22,723 | 403 | 12,001 | 9,896 | 1,537 | 3,738 | 4,017 | 1,721 | 56,036 |
| 1979 | 23,144 | 374 | 13,656 | 10,156 | 1,684 | 6,716 | 4,103 | 2,878 | 62,711 |
| 1980 | 24,253 | 555 | 15,858 | 10,002 | 2,771 | 9,274 | 5,561 | 4,248 | 72,522 |
| 1981 | 33,425 | 520 | 17,100 | 10,003 | 2,452 | 10,569 | 5,342 | 4,194 | 83,605 |
| 1982 | 42,320 | 2,267 | 15,428 | 11,233 | 3,288 | 13,151 | 9,177 | 4,654 | 101,518 |
| 1983 | 50,306 | 5,502 | 16,859 | 15,107 | 5,551 | 17,816 | 9,984 | 5,321 | 126,446 |
| 1984 | 60,748 | 6,783 | 17,184 | 15,164 | 4,887 | 24,039 | 11,978 | 7,166 | 147,949 |
| 1985 | 74,331 | 7,387 | 15,668 | 15,198 | 5,706 | 31,068 | 15,086 | 10,106 | 174,550 |
| 1986 | 71,073 | 6,259 | 18,374 | 17,779 | 7,277 | 34,887 | 18,414 | 11,293 | 185,356 |
| 1987 | 83,732 | 8,591 | 20,201 | 16,012 | 6,400 | 38,870 | 19,547 | 13,918 | 207,271 |
| 1988 | 86,591 | 8,634 | 20,606 | 21,115 | 7,492 | 42,460 | 19,028 | 17,186 | 223,112 |
| 1989 | 81,566 | 11,402 | 21,133 | 20,804 | 9,854 | 48,037 | 23,950 | 17,840 | 234,586 |
| 1990 | 80,079 | 11,797 | 20,325 | 24,224 | 10,460 | 52,984 | 26,051 | 19,574 | 245,494 |
| 1991 | 72,945 | 11,580 | 22,370 | 35,792 | 12,091 | 57,846 | 33,054 | 21,015 | 266,693 |
| 1992 | 70,930 | 13,696 | 22,607 | 44,555 | 12,428 | 62,042 | 39,396 | 20,222 | 285,876 |
| 1993 | 61,221 | 10,359 | 23,498 | 60,242 | 11,229 | 69,917 | 45,321 | 18,397 | 300,184 |
| 1994 | 52,842 | 12,039 | 24,902 | 70,063 | 9,992 | 78,545 | 52,847 | 24,967 | 326,197 |
| 1995 | 48,867 | 12,048 | 23,590 | 76,560 | 10,947 | 87,467 | 59,044 | 26,324 | 344,847 |
| 1996 | 46,187 | 10,013 | 25,556 | 74,789 | 10,952 | 90,174 | 71,514 | 24,828 | 354,013 |
| 1997 | 39,924 | 10,470 | 27,198 | 67,715 | 7,054 | 94,991 | 79,445 | 25,509 | 352,306 |
| 1998 | 33,537 | 8,525 | 27,911 | 66,375 | 6,659 | 99,687 | 79,895 | 28,174 | 350,763 |
| 1999 | 37,118 | 9,290 | 29,075 | 54,080 | 7,944 | 108,656 | 81,257 | 28,394 | 355,814 |
| 2000 | 33,259 | 9,062 | 31,726 | 58,269 | 2,842 | 108,752 | 73,911 | 30,280 | 348,101 |
| 2001 | 33,979 | 7,643 | 37,204 | 65,396 | 3,561 | 99,744 | 76,482 | 34,341 | 358,350 |
| 2002 | 22,360 | 8,417 | 38,859 | 66,057 | 3,307 | 97,463 | 81,521 | 33,436 | 351,920 |

**Reference Table IV** *(cont'd)*

*Distribution of Domestic Holdings of Government of Canada Securities*

PART B —Treasury Bills, Canada Bills, Bonds,[1] Canada Savings Bonds and Canada Premium Bonds

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasi-banks[2] | Life insurance companies and pension funds | Public and other financial institutions[3] | All levels of government[4] | Total[5] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (%) | | | | |
| 1976 | 44.40 | 0.98 | 20.41 | 21.46 | 1.77 | 3.56 | 5.63 | 1.81 | 100.00 |
| 1977 | 42.32 | 0.67 | 21.43 | 20.04 | 2.19 | 4.74 | 6.50 | 2.12 | 100.00 |
| 1978 | 40.55 | 0.72 | 21.42 | 17.66 | 2.74 | 6.67 | 7.17 | 3.07 | 100.00 |
| 1979 | 36.91 | 0.60 | 21.78 | 16.19 | 2.69 | 10.71 | 6.54 | 4.59 | 100.00 |
| 1980 | 33.44 | 0.77 | 21.87 | 13.79 | 3.82 | 12.79 | 7.67 | 5.86 | 100.00 |
| 1981 | 39.98 | 0.62 | 20.45 | 11.96 | 2.93 | 12.64 | 6.39 | 5.02 | 100.00 |
| 1982 | 41.69 | 2.23 | 15.20 | 11.07 | 3.24 | 12.95 | 9.04 | 4.58 | 100.00 |
| 1983 | 39.78 | 4.35 | 13.33 | 11.95 | 4.39 | 14.09 | 7.90 | 4.21 | 100.00 |
| 1984 | 41.06 | 4.58 | 11.61 | 10.25 | 3.30 | 16.25 | 8.10 | 4.84 | 100.00 |
| 1985 | 42.58 | 4.23 | 8.98 | 8.71 | 3.27 | 17.80 | 8.64 | 5.79 | 100.00 |
| 1986 | 38.34 | 3.38 | 9.91 | 9.59 | 3.93 | 18.82 | 9.93 | 6.09 | 100.00 |
| 1987 | 40.40 | 4.14 | 9.75 | 7.73 | 3.09 | 18.75 | 9.43 | 6.71 | 100.00 |
| 1988 | 38.81 | 3.87 | 9.24 | 9.46 | 3.36 | 19.03 | 8.53 | 7.70 | 100.00 |
| 1989 | 34.77 | 4.86 | 9.01 | 8.87 | 4.20 | 20.48 | 10.21 | 7.60 | 100.00 |
| 1990 | 32.62 | 4.81 | 8.28 | 9.87 | 4.26 | 21.58 | 10.61 | 7.97 | 100.00 |
| 1991 | 27.35 | 4.34 | 8.39 | 13.42 | 4.53 | 21.69 | 12.39 | 7.88 | 100.00 |
| 1992 | 24.81 | 4.79 | 7.91 | 15.59 | 4.35 | 21.70 | 13.78 | 7.07 | 100.00 |
| 1993 | 20.39 | 3.45 | 7.83 | 20.07 | 3.74 | 23.29 | 15.10 | 6.13 | 100.00 |
| 1994 | 16.20 | 3.69 | 7.63 | 21.48 | 3.06 | 24.08 | 16.20 | 7.65 | 100.00 |
| 1995 | 14.17 | 3.49 | 6.84 | 22.20 | 3.17 | 25.36 | 17.12 | 7.63 | 100.00 |
| 1996 | 13.05 | 2.83 | 7.22 | 21.13 | 3.09 | 25.47 | 20.20 | 7.01 | 100.00 |
| 1997 | 11.33 | 2.97 | 7.72 | 19.22 | 2.00 | 26.96 | 22.55 | 7.24 | 100.00 |
| 1998 | 9.56 | 2.43 | 7.96 | 18.92 | 1.90 | 28.42 | 22.78 | 8.03 | 100.00 |
| 1999 | 10.43 | 2.61 | 8.17 | 15.20 | 2.23 | 30.54 | 22.84 | 7.98 | 100.00 |
| 2000 | 9.55 | 2.60 | 9.11 | 16.74 | 0.82 | 31.24 | 21.23 | 8.70 | 100.00 |
| 2001 | 9.48 | 2.13 | 10.38 | 18.25 | 0.99 | 27.83 | 21.34 | 9.58 | 100.00 |
| 2002 | 6.50 | 2.39 | 11.04 | 18.77 | 0.94 | 27.69 | 23.16 | 9.50 | 100.00 |

**Reference Table IV** *(cont'd)*
*Distribution of Domestic Holdings of Government of Canada Securities*
PART C —Treasury Bills and Canada Bills

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasi-banks[2] | Life insurance companies and pension funds | Public and other financial institutions[3] | All levels of government[4] | Total[5] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | ($ millions) | | | | |
| 1976 | 171 | 125 | 1,964 | 4,219 | 52 | 44 | 515 | 193 | 7,283 |
| 1977 | 394 | 136 | 2,461 | 4,949 | 143 | 98 | 1,020 | 311 | 9,512 |
| 1978 | 576 | 198 | 3,567 | 5,517 | 193 | 261 | 1,554 | 519 | 12,385 |
| 1979 | 785 | 165 | 4,345 | 6,690 | 65 | 245 | 1,550 | 843 | 14,688 |
| 1980 | 1,493 | 288 | 5,317 | 7,500 | 619 | 460 | 2,431 | 1,512 | 19,620 |
| 1981 | 1,019 | 369 | 5,431 | 8,597 | 343 | 560 | 2,187 | 1,082 | 19,588 |
| 1982 | 1,237 | 1,930 | 2,483 | 10,034 | 1,357 | 1,244 | 5,008 | 1,199 | 24,492 |
| 1983 | 3,766 | 5,146 | 2,595 | 12,879 | 3,180 | 2,587 | 5,376 | 1,286 | 36,815 |
| 1984 | 7,454 | 6,275 | 3,515 | 12,997 | 2,792 | 3,876 | 6,544 | 2,498 | 45,951 |
| 1985 | 13,340 | 6,517 | 3,985 | 12,629 | 3,651 | 3,924 | 8,129 | 4,136 | 56,311 |
| 1986 | 16,158 | 4,875 | 7,967 | 15,161 | 4,709 | 3,592 | 10,164 | 3,416 | 66,042 |
| 1987 | 17,733 | 7,232 | 9,682 | 11,498 | 3,725 | 4,806 | 9,589 | 5,002 | 69,267 |
| 1988 | 20,213 | 7,414 | 9,945 | 15,224 | 5,614 | 7,648 | 9,133 | 7,726 | 82,917 |
| 1989 | 29,156 | 9,668 | 11,124 | 17,410 | 8,116 | 9,664 | 12,908 | 9,251 | 107,297 |
| 1990 | 36,461 | 10,756 | 10,574 | 17,841 | 8,976 | 11,737 | 13,298 | 9,388 | 119,031 |
| 1991 | 30,423 | 10,437 | 13,093 | 24,382 | 9,089 | 12,386 | 17,636 | 10,417 | 127,863 |
| 1992 | 32,901 | 11,254 | 14,634 | 27,989 | 9,646 | 13,639 | 19,907 | 8,726 | 138,696 |
| 1993 | 27,459 | 9,657 | 16,876 | 29,901 | 9,222 | 17,085 | 22,336 | 7,151 | 139,687 |
| 1994 | 17,562 | 8,499 | 18,973 | 30,415 | 6,879 | 14,376 | 22,021 | 10,631 | 129,356 |
| 1995 | 16,296 | 9,204 | 18,298 | 30,865 | 7,760 | 15,315 | 25,183 | 10,603 | 133,524 |
| 1996 | 10,474 | 8,285 | 17,593 | 23,470 | 5,493 | 13,520 | 32,752 | 6,264 | 117,851 |
| 1997 | 5,966 | 6,858 | 14,233 | 19,448 | 3,133 | 8,944 | 32,653 | 3,803 | 95,038 |
| 1998 | 1,291 | 6,215 | 10,729 | 16,713 | 2,392 | 4,529 | 32,508 | 3,578 | 77,955 |
| 1999 | 8,539 | 6,662 | 8,584 | 9,814 | 3,234 | 8,128 | 36,932 | 3,497 | 85,390 |
| 2000 | 7,568 | 6,735 | 8,090 | 6,188 | 685 | 7,222 | 31,087 | 5,108 | 72,683 |
| 2001 | 8,744 | 6,990 | 11,427 | 9,969 | 675 | 10,401 | 37,154 | 6,838 | 92,198 |
| 2002 | 551 | 5,894 | 11,639 | 18,869 | 708 | 12,768 | 40,087 | 7,115 | 97,631 |

**Reference Table IV** *(cont'd)*

*Distribution of Domestic Holdings of Government of Canada Securities*

PART D—Treasury Bills and Canada Bills

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasi-banks[2] | Life insurance companies and pension funds | Public and other financial institutions[3] | All levels of government[4] | Total[5] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (%) | | | | |
| 1976 | 2.35 | 1.72 | 26.97 | 57.93 | 0.71 | 0.60 | 7.07 | 2.65 | 100.00 |
| 1977 | 4.14 | 1.43 | 25.87 | 52.03 | 1.50 | 1.03 | 10.72 | 3.27 | 100.00 |
| 1978 | 4.65 | 1.60 | 28.80 | 44.55 | 1.56 | 2.11 | 12.55 | 4.19 | 100.00 |
| 1979 | 5.34 | 1.12 | 29.58 | 45.55 | 0.44 | 1.67 | 10.55 | 5.74 | 100.00 |
| 1980 | 7.61 | 1.47 | 27.10 | 38.23 | 3.15 | 2.34 | 12.39 | 7.71 | 100.00 |
| 1981 | 5.20 | 1.88 | 27.73 | 43.89 | 1.75 | 2.86 | 11.16 | 5.52 | 100.00 |
| 1982 | 5.05 | 7.88 | 10.14 | 40.97 | 5.54 | 5.08 | 20.45 | 4.90 | 100.00 |
| 1983 | 10.23 | 13.98 | 7.05 | 34.98 | 8.64 | 7.03 | 14.60 | 3.49 | 100.00 |
| 1984 | 16.22 | 13.66 | 7.65 | 28.28 | 6.08 | 8.44 | 14.24 | 5.44 | 100.00 |
| 1985 | 23.69 | 11.57 | 7.08 | 22.43 | 6.48 | 6.97 | 14.44 | 7.34 | 100.00 |
| 1986 | 24.47 | 7.38 | 12.06 | 22.96 | 7.13 | 5.44 | 15.39 | 5.17 | 100.00 |
| 1987 | 25.60 | 10.44 | 13.98 | 16.60 | 5.38 | 6.94 | 13.84 | 7.22 | 100.00 |
| 1988 | 24.38 | 8.94 | 11.99 | 18.36 | 6.77 | 9.22 | 11.01 | 9.32 | 100.00 |
| 1989 | 27.17 | 9.01 | 10.37 | 16.23 | 7.56 | 9.01 | 12.03 | 8.62 | 100.00 |
| 1990 | 30.63 | 9.04 | 8.88 | 14.99 | 7.54 | 9.86 | 11.17 | 7.89 | 100.00 |
| 1991 | 23.79 | 8.16 | 10.24 | 19.07 | 7.11 | 9.69 | 13.79 | 8.15 | 100.00 |
| 1992 | 23.72 | 8.11 | 10.55 | 20.18 | 6.95 | 9.83 | 14.35 | 6.29 | 100.00 |
| 1993 | 19.66 | 6.91 | 12.08 | 21.41 | 6.60 | 12.23 | 15.99 | 5.12 | 100.00 |
| 1994 | 13.58 | 6.57 | 14.67 | 23.51 | 5.32 | 11.11 | 17.02 | 8.22 | 100.00 |
| 1995 | 12.20 | 6.89 | 13.70 | 23.12 | 5.81 | 11.47 | 18.86 | 7.94 | 100.00 |
| 1996 | 8.89 | 7.03 | 14.93 | 19.91 | 4.66 | 11.47 | 27.79 | 5.32 | 100.00 |
| 1997 | 6.28 | 7.22 | 14.98 | 20.46 | 3.30 | 9.41 | 34.36 | 4.00 | 100.00 |
| 1998 | 1.66 | 7.97 | 13.76 | 21.44 | 3.07 | 5.81 | 41.70 | 4.59 | 100.00 |
| 1999 | 10.00 | 7.80 | 10.05 | 11.49 | 3.79 | 9.52 | 43.25 | 4.10 | 100.00 |
| 2000 | 10.41 | 9.27 | 11.13 | 8.51 | 0.94 | 9.94 | 42.77 | 7.03 | 100.00 |
| 2001 | 9.48 | 7.58 | 12.39 | 10.81 | 0.73 | 11.28 | 40.30 | 7.42 | 100.00 |
| 2002 | 0.56 | 6.04 | 11.92 | 19.33 | 0.73 | 13.08 | 41.06 | 7.29 | 100.00 |

**Reference Table IV** *(cont'd)*

*Distribution of Domestic Holdings of Government of Canada Securities*

PART E--Bonds[1]

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasi-banks[2] | Life insurance companies and pension funds | Public and other financial institutions[3] | All levels of government[4] | Total[5] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | ($ millions) | | | | |
| 1976 | 17,761 | 270 | 6,278 | 4,447 | 664 | 1,392 | 1,758 | 537 | 33,107 |
| 1977 | 19,883 | 185 | 7,807 | 4,652 | 905 | 2,173 | 2,094 | 703 | 38,402 |
| 1978 | 22,147 | 205 | 8,434 | 4,379 | 1,344 | 3,477 | 2,463 | 1,202 | 43,651 |
| 1979 | 22,359 | 209 | 9,311 | 3,466 | 1,619 | 6,471 | 2,553 | 2,035 | 48,023 |
| 1980 | 22,760 | 267 | 10,541 | 2,502 | 2,152 | 8,814 | 3,130 | 2,736 | 52,902 |
| 1981 | 32,406 | 151 | 11,669 | 1,406 | 2,109 | 10,009 | 3,155 | 3,112 | 64,017 |
| 1982 | 41,083 | 337 | 12,945 | 1,199 | 1,931 | 11,907 | 4,169 | 3,455 | 77,026 |
| 1983 | 46,540 | 356 | 14,264 | 2,228 | 2,371 | 15,229 | 4,608 | 4,035 | 89,631 |
| 1984 | 53,294 | 508 | 13,669 | 2,167 | 2,095 | 20,163 | 5,434 | 4,668 | 101,998 |
| 1985 | 60,991 | 870 | 11,683 | 2,569 | 2,055 | 27,144 | 6,957 | 5,970 | 118,239 |
| 1986 | 54,915 | 1,384 | 10,407 | 2,618 | 2,568 | 31,295 | 8,250 | 7,877 | 119,314 |
| 1987 | 65,999 | 1,359 | 10,519 | 4,514 | 2,675 | 34,064 | 9,958 | 8,916 | 138,004 |
| 1988 | 66,378 | 1,220 | 10,661 | 5,891 | 1,878 | 34,812 | 9,895 | 9,460 | 140,195 |
| 1989 | 52,410 | 1,734 | 10,009 | 3,394 | 1,738 | 38,373 | 11,042 | 8,589 | 127,289 |
| 1990 | 43,618 | 1,041 | 9,751 | 6,383 | 1,484 | 41,247 | 12,753 | 10,186 | 126,463 |
| 1991 | 42,522 | 1,143 | 9,277 | 11,410 | 3,002 | 45,460 | 15,418 | 10,598 | 138,830 |
| 1992 | 38,029 | 2,442 | 7,973 | 16,566 | 2,782 | 48,403 | 19,489 | 11,496 | 147,180 |
| 1993 | 33,762 | 702 | 6,622 | 30,341 | 2,007 | 52,832 | 22,985 | 11,246 | 160,497 |
| 1994 | 35,280 | 3,540 | 5,929 | 39,648 | 3,113 | 64,169 | 30,826 | 14,336 | 196,841 |
| 1995 | 32,571 | 2,844 | 5,292 | 45,695 | 3,187 | 72,152 | 33,861 | 15,721 | 211,323 |
| 1996 | 35,713 | 1,728 | 7,963 | 51,319 | 5,459 | 76,654 | 38,762 | 18,564 | 236,162 |
| 1997 | 33,958 | 3,612 | 12,965 | 48,267 | 3,921 | 86,047 | 46,792 | 21,706 | 257,268 |
| 1998 | 32,246 | 2,310 | 17,182 | 49,662 | 4,267 | 95,158 | 47,387 | 24,596 | 272,808 |
| 1999 | 28,579 | 2,628 | 20,491 | 44,266 | 4,710 | 100,528 | 44,325 | 24,897 | 270,424 |
| 2000 | 25,691 | 2,327 | 23,636 | 52,081 | 2,157 | 101,530 | 42,824 | 25,172 | 275,418 |
| 2001 | 25,235 | 653 | 25,777 | 55,427 | 2,886 | 89,343 | 39,328 | 27,503 | 266,152 |
| 2002 | 22,309 | 2,523 | 27,220 | 47,188 | 2,599 | 84,695 | 41,434 | 26,321 | 254,289 |

**Reference Table IV** *(cont'd)*

*Distribution of Domestic Holdings of Government of Canada Securities*

PART F—Bonds[1]

| Year end | Persons and unincorporated businesses | Non-financial corporations | Bank of Canada | Chartered banks | Quasi-banks[2] | Life insurance companies and pension funds | Public and other financial institutions[3] | All levels of government[4] | Total[5] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | (%) | | | | |
| 1976 | 53.65 | 0.82 | 18.96 | 13.43 | 2.01 | 4.20 | 5.31 | 1.62 | 100.00 |
| 1977 | 51.78 | 0.48 | 20.33 | 12.11 | 2.36 | 5.66 | 5.45 | 1.83 | 100.00 |
| 1978 | 50.74 | 0.47 | 19.32 | 10.03 | 3.08 | 7.97 | 5.64 | 2.75 | 100.00 |
| 1979 | 46.56 | 0.44 | 19.39 | 7.22 | 3.37 | 13.47 | 5.32 | 4.24 | 100.00 |
| 1980 | 43.02 | 0.50 | 19.93 | 4.73 | 4.07 | 16.66 | 5.92 | 5.17 | 100.00 |
| 1981 | 50.62 | 0.24 | 18.23 | 2.20 | 3.29 | 15.63 | 4.93 | 4.86 | 100.00 |
| 1982 | 53.34 | 0.44 | 16.81 | 1.56 | 2.51 | 15.46 | 5.41 | 4.49 | 100.00 |
| 1983 | 51.92 | 0.40 | 15.91 | 2.49 | 2.65 | 16.99 | 5.14 | 4.50 | 100.00 |
| 1984 | 52.25 | 0.50 | 13.40 | 2.12 | 2.05 | 19.77 | 5.33 | 4.58 | 100.00 |
| 1985 | 51.58 | 0.74 | 9.88 | 2.17 | 1.74 | 22.96 | 5.88 | 5.05 | 100.00 |
| 1986 | 46.03 | 1.16 | 8.72 | 2.19 | 2.15 | 26.23 | 6.91 | 6.60 | 100.00 |
| 1987 | 47.82 | 0.98 | 7.62 | 3.27 | 1.94 | 24.68 | 7.22 | 6.46 | 100.00 |
| 1988 | 47.35 | 0.87 | 7.60 | 4.20 | 1.34 | 24.83 | 7.06 | 6.75 | 100.00 |
| 1989 | 41.17 | 1.36 | 7.86 | 2.67 | 1.37 | 30.15 | 8.67 | 6.75 | 100.00 |
| 1990 | 34.49 | 0.82 | 7.71 | 5.05 | 1.17 | 32.62 | 10.08 | 8.05 | 100.00 |
| 1991 | 30.63 | 0.82 | 6.68 | 8.22 | 2.16 | 32.75 | 11.11 | 7.63 | 100.00 |
| 1992 | 25.84 | 1.66 | 5.42 | 11.26 | 1.89 | 32.89 | 13.24 | 7.81 | 100.00 |
| 1993 | 21.04 | 0.44 | 4.13 | 18.90 | 1.25 | 32.92 | 14.32 | 7.01 | 100.00 |
| 1994 | 17.92 | 1.80 | 3.01 | 20.14 | 1.58 | 32.60 | 15.66 | 7.28 | 100.00 |
| 1995 | 15.41 | 1.35 | 2.50 | 21.62 | 1.51 | 34.14 | 16.02 | 7.44 | 100.00 |
| 1996 | 15.12 | 0.73 | 3.37 | 21.73 | 2.31 | 32.46 | 16.41 | 7.86 | 100.00 |
| 1997 | 13.20 | 1.40 | 5.04 | 18.76 | 1.52 | 33.45 | 18.19 | 8.44 | 100.00 |
| 1998 | 11.82 | 0.85 | 6.30 | 18.20 | 1.56 | 34.88 | 17.37 | 9.02 | 100.00 |
| 1999 | 10.57 | 0.97 | 7.58 | 16.37 | 1.74 | 37.17 | 16.39 | 9.21 | 100.00 |
| 2000 | 9.33 | 0.84 | 8.58 | 18.91 | 0.78 | 36.86 | 15.55 | 9.14 | 100.00 |
| 2001 | 9.48 | 0.25 | 9.69 | 20.83 | 1.08 | 33.57 | 14.78 | 10.33 | 100.00 |
| 2002 | 8.77 | 0.99 | 10.70 | 18.56 | 1.02 | 33.31 | 16.29 | 10.35 | 100.00 |

Note: Because of timing and valuation differences, *The National Balance Sheet Accounts* data contained in this table are not necessarily on the same basis as other data elsewhere in this publication (most of the data in this report are on a par-value basis—that is, outstanding securities are valued at par). For this reason, although the two sets of data yield very similar information, the data in this table are not strictly comparable with other data in this publication.

[1] Includes bonds denominated in foreign currencies.

[2] Includes Quebec savings banks, credit unions and caisses populaires, trust companies and mortgage loan companies.

[3] Includes investment dealers, mutual funds, property and casualty insurance companies, sales, finance and consumer loan companies, accident and sickness branches of life insurance companies, other private financial institutions (not elsewhere included), federal public financial institutions, and provincial financial institutions.

[4] Includes Government of Canada holdings of its own debt, provincial, municipal and hospital holdings, and holdings of the Canada Pension Plan and the Quebec Pension Plan.

[5] May not add due to rounding.

Source: Statistics Canada, *The National Balance Sheet Accounts*.

**Reference Table V**

*Non-Resident (Direct) Holdings of Government of Canada Debt*

| As at March 31 | Marketable bonds[1] | Treasury bills and Canada Bills | Total | Total as per cent of total market debt |
|---|---|---|---|---|
| | | (C$ billions) | | (%) |
| 1979 | 5.0 | 0.9 | 5.9 | 8.9 |
| 1980 | 5.6 | 0.7 | 6.3 | 8.7 |
| 1981 | 6.8 | 1.1 | 7.9 | 9.5 |
| 1982 | 8.8 | 1.1 | 9.9 | 10.6 |
| 1983 | 10.0 | 1.6 | 11.6 | 10.0 |
| 1984 | 10.3 | 2.6 | 12.9 | 9.0 |
| 1985 | 14.5 | 4.6 | 19.1 | 11.1 |
| 1986 | 22.1 | 3.0 | 25.1 | 12.5 |
| 1987 | 30.3 | 4.7 | 35.0 | 15.3 |
| 1988 | 33.0 | 9.3 | 42.3 | 16.9 |
| 1989 | 41.3 | 15.7 | 57.0 | 20.6 |
| 1990 | 49.9 | 13.3 | 63.2 | 21.5 |
| 1991 | 57.6 | 16.1 | 73.7 | 22.8 |
| 1992 | 63.6 | 23.0 | 86.6 | 24.6 |
| 1993 | 80.1 | 28.3 | 108.4 | 28.3 |
| 1994 | 79.3 | 34.0 | 113.3 | 27.4 |
| 1995 | 73.7 | 39.2 | 112.9 | 25.6 |
| 1996 | 84.1 | 37.7 | 121.8 | 25.9 |
| 1997 | 91.8 | 27.7 | 119.4 | 25.0 |
| 1998 | 94.3 | 20.0 | 114.3 | 24.5 |
| 1999 | 86.6 | 19.4 | 106.0 | 23.0 |
| 2000 | 85.7 | 14.2 | 99.9 | 21.9 |
| 2001 | 83.5 | 10.5 | 94.0 | 21.1 |
| 2002 | 74.0 | 7.4 | 81.4 | 18.4 |
| 2003 | 80.7 | 8.5 | 89.2 | 20.3 |

Note: Numbers may not add due to rounding.

[1] Includes bonds denominated in foreign currencies.

Source: Statistics Canada, *Canada's International Transactions in Securities*.

## Reference Table VI

*Fiscal 2002–03 Treasury Bill Program*

| Settlement Date | Maturing | | | | | New issues | | | | | Net increment | | | Average tender yields | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CMB[1] | 3 mo | 6 mo | 12 mo | Total | CMB[1] | 3 mo | 6 mo | 12 mo | Total | Total | Cumulative | O/S[2] | CMB[1] | 3 mo | 6 mo | 12 mo |
| | ($ millions) | | | | | | | | | | | | | (%) | | | |
| 04-Apr-2002 | – | – | – | – | – | – | – | – | – | – | – | – | 94 200 | | | | |
| 11-Apr-2002 | – | 4 100 | 3 500 | – | 7 600 | – | 4 400 | 1 800 | 1 800 | 8 000 | 400 | 400 | 94 600 | | 2 38 | 2 68 | 3 36 |
| 18-Apr-2002 | – | – | – | – | – | – | – | – | – | – | – | 400 | 94 600 | | | | |
| 25-Apr-2002 | – | 4 400 | – | 3 200 | 7 600 | 3 000 | 4 700 | 1 900 | 1 900 | 11 500 | 3 900 | 4 300 | 98 500 | 2 27 | 2 41 | 2 72 | 3 37 |
| 02-May-2002 | – | – | – | – | – | – | – | – | – | – | – | 4 300 | 98 500 | | | | |
| 09-May-2002 | – | 4 400 | 3 600 | – | 8 000 | – | 4 700 | 1 900 | 1 900 | 8 500 | 500 | 4 800 | 99 000 | | 2 47 | 2 67 | 3 17 |
| 16-May-2002 | – | – | – | – | – | – | – | – | – | – | – | 4 800 | 99 000 | | | | |
| 23-May-2002 | – | 4 400 | – | 2 900 | 7 300 | – | 4 700 | 1 900 | 1 900 | 8 500 | 1 200 | 6 000 | 100 200 | | 2 62 | 2 91 | 3 53 |
| 30-May-2002 | – | – | – | – | – | 2 000 | – | – | – | 2 000 | 2 000 | 8 000 | 102 200 | 2 43 | | | |
| 06-Jun-2002 | 300 | 4 400 | 3 500 | – | 10 900 | 1 500 | 4 700 | 1 900 | 1 900 | 10 000 | -900 | 7 100 | 101 300 | 2 49 | 2 67 | 2 92 | 3 42 |
| 13-Jun-2002 | – | – | – | – | – | – | – | – | – | – | – | 7 100 | 101 300 | | | | |
| 20-Jun-2002 | – | 4 100 | – | 2 800 | 6 900 | – | 4 700 | 1 900 | 1 900 | 8 500 | 1 600 | 8 700 | 102 900 | | 2 74 | 2 98 | 3 38 |
| 27-Jun-2002 | – | – | – | – | – | – | – | – | – | – | – | 8 700 | 102 900 | | | | |
| 04-Jul-2002 | 350 | 4 100 | 3 500 | – | 11 100 | – | 4 400 | 1 800 | 1 800 | 8 000 | -3 100 | 5 600 | 99 800 | | 2 75 | 2 94 | 3 27 |
| 11-Jul-2002 | – | – | – | – | – | – | – | – | – | – | – | 5 600 | 99 800 | | | | |
| 18-Jul-2002 | – | 4 400 | – | 3 100 | 7 500 | – | 4 400 | 1 800 | 1 800 | 8 000 | 500 | 6 100 | 100 300 | | 2 83 | 2 96 | 3 23 |
| 25-Jul-2002 | – | – | – | – | – | 750 | – | – | – | 750 | 750 | 6 850 | 101 050 | 2 69 | | | |
| 01-Aug-2002 | 750 | 4 700 | 3 600 | – | 9 050 | – | 4 700 | 1 900 | 1 900 | 8 500 | -550 | 6 300 | 100 500 | | 2 85 | 2 98 | 3 16 |
| 08-Aug-2002 | – | – | – | – | – | – | – | – | – | – | – | 6 300 | 100 500 | | | | |
| 15-Aug-2002 | – | 4 700 | – | 3 200 | 7 900 | – | 4 400 | 1 800 | 1 800 | 8 000 | 100 | 6 400 | 100 600 | | 2 81 | 2 89 | 2 98 |
| 22-Aug-2002 | – | – | – | – | – | – | – | – | – | – | – | 6 400 | 100 600 | | | | |
| 29-Aug-2002 | – | 4 700 | 3 500 | – | 8 200 | 1 250 | 4 400 | 1 800 | 1 800 | 9 250 | 1 050 | 7 450 | 101 650 | 2 82 | 2 30 | 3 14 | 3 35 |
| 05-Sep-2002 | – | – | – | – | – | – | – | – | – | – | – | 7 450 | 101 650 | | | | |
| 12-Sep-2002 | 125 | 4 700 | – | 3 300 | 9 250 | – | 4 400 | 1 800 | 1 800 | 8 000 | -1 250 | 6 200 | 100 400 | | 2 83 | 3 02 | 3 24 |
| 19-Sep-2002 | – | – | – | – | – | – | – | – | – | – | – | 6 200 | 100 400 | | | | |
| 26-Sep-2002 | – | 4 700 | 3 500 | – | 8 200 | 2 000 | 4 400 | 1 800 | 1 800 | 10 000 | 1 800 | 8 000 | 102 200 | 2 68 | 2 83 | 2 92 | 3 07 |

## Reference Table VI *(cont'd)*
*Fiscal 2002–03 Treasury Bill Program*

| Settlement Date | Maturing | | | | | New issues | | | | | Net increment | | | Average tender yields | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CMB[1] | 3 mo | 6 mo | 12 mo | Total | CMB[1] | 3 mo | 6 mo | 12 mo | Total | Total | Cumulative | O/S[2] | CMB[1] | 3 mo | 6 mo | 12 mo |
| | ($ millions) | | | | | | | | | | | | | (%) | | | |
| 03-Oct-2002 | – | – | – | – | – | – | – | – | – | – | – | 8,000 | 102,200 | | | | |
| 10-Oct-2002 | 2,000 | 4,400 | – | 3,500 | 9,900 | – | 4,700 | 1,900 | 1,900 | 8,500 | -1,400 | 6,600 | 100,800 | | 2.81 | 2.92 | 3.11 |
| 17-Oct-2002 | – | – | – | – | – | – | – | – | – | – | – | 6,600 | 100,800 | | | | |
| 24-Oct-2002 | – | 4,400 | 3,800 | – | 8,200 | 2,750 | 4,700 | 1,900 | 1,900 | 11,250 | 3,050 | 9,650 | 103,850 | 2.70 | 2.81 | 2.93 | 3.20 |
| 31-Oct-2002 | – | – | – | – | – | – | – | – | – | – | – | 9,650 | 103,850 | | | | |
| 07-Nov-2002 | – | 4,700 | – | 3,600 | 8,300 | – | 5,000 | 2,000 | 2,000 | 9,000 | 700 | 10,350 | 104,550 | | 2.73 | 2.82 | 2.94 |
| 14-Nov-2002 | – | – | – | – | – | – | – | – | – | – | – | 10,350 | 104,550 | | | | |
| 21-Nov-2002 | – | 4,400 | 3,800 | – | 8,200 | – | 4,700 | 1,900 | 1,900 | 8,500 | 300 | 10,650 | 104,850 | | 2.73 | 2.82 | 2.96 |
| 28-Nov-2002 | – | – | – | – | – | 1,750 | – | – | – | 1,750 | 1,750 | 12,400 | 106,600 | 2.70 | | | |
| 05-Dec-2002 | 2,750 | 4,400 | – | 3,500 | 10,650 | – | 4,400 | 1,800 | 1,800 | 8,000 | -2,650 | 9,750 | 103,950 | | 2.73 | 2.83 | 3.07 |
| 12-Dec-2002 | – | – | – | – | – | – | – | – | – | – | – | 9,750 | 103,950 | | | | |
| 19-Dec-2002 | – | 4,400 | 3,700 | – | 8,100 | 1,000 | 4,100 | 1,700 | 1,700 | 8,500 | 400 | 10,150 | 104,350 | 2.69 | 2.70 | 2.81 | 2.99 |
| 26-Dec-2002 | – | – | – | – | – | – | – | – | – | – | – | 10,150 | 104,350 | | | | |
| 02-Jan-2003 | 2,750 | 4,400 | – | 3,500 | 10,650 | – | 3,800 | 1,600 | 1,600 | 7,000 | -3,650 | 6,500 | 100,700 | | 2.67 | 2.78 | 2.89 |
| 09-Jan-2003 | – | – | – | – | – | – | – | – | – | – | – | 6,500 | 100,700 | | | | |
| 16-Jan-2003 | – | 4,700 | 3,700 | – | 8,400 | – | 4,100 | 1,700 | 1,700 | 7,500 | -900 | 5,600 | 99,800 | | 2.69 | 2.82 | 2.97 |
| 23-Jan-2003 | – | – | – | – | – | 3,000 | – | – | – | 3,000 | 3,000 | 8,600 | 102,800 | 2.73 | | | |
| 30-Jan-2003 | – | 4,700 | – | 3,600 | 8,300 | – | 4,700 | 1,900 | 1,900 | 8,500 | 200 | 8,800 | 103,000 | | 2.81 | 2.30 | 3.24 |
| 06-Feb-2003 | – | – | – | – | – | – | – | – | – | – | – | 8,800 | 103,000 | | | | |
| 13-Feb-2003 | 3,000 | 5,000 | 3,600 | – | 11,600 | – | 4,100 | 1,700 | 1,700 | 7,500 | -4,100 | 4,700 | 98,900 | | 2.83 | 2.94 | 3.25 |
| 20-Feb-2003 | – | – | – | – | – | 750 | – | – | – | 750 | 750 | 5,450 | 99,650 | 2.65 | | | |
| 27-Feb-2003 | – | 4,700 | – | 3,500 | 8,200 | – | 4,700 | 1,900 | 1,900 | 8,500 | 300 | 5,750 | 99,950 | | 2.86 | 3.03 | 3.28 |
| 06-Mar-2003 | – | – | – | – | – | – | – | – | – | – | – | 5,750 | 99,950 | | | | |
| 13-Mar-2003 | 750 | 4,400 | 3,600 | – | 8,750 | – | 4,700 | 1,900 | 1,900 | 8,500 | -250 | 5,500 | 99,700 | | 3.00 | 3.19 | 3.39 |
| 20-Mar-2003 | – | – | – | – | – | 2,500 | – | – | – | 2,500 | 2,500 | 8,000 | 102,200 | 2.93 | | | |
| 27-Mar-2003 | – | 4,100 | – | 3,500 | 7,600 | 1,500 | 4,700 | 1,900 | 1,900 | 10,000 | 2,400 | 10,400 | 104,600 | 2.99 | 3.14 | 3.37 | 3.66 |
| Total | 19,750 | 116,500 | 46,900 | 43,200 | 226,350 | 23,750 | 117,400 | 47,800 | 47,800 | 236,750 | 10,400 | 363,850 | 5,262,250 | | | | |

[1] Cash management bill.

[2] Outstanding.

Source: Bank of Canada.

Reference Table VII

*Fiscal 2002–03 Treasury Bill Auction Results*

| Auction date | Term | Issue amount | Average price | Average yield | Bid coverage | Tail |
|---|---|---|---|---|---|---|
| | (months) | ($ millions) | ($) | (%) | | (basis points) |
| 09-Apr-02 | 12 | 1,800 | 95.840 | 4.527 | 1.565 | 1.1 |
| 09-Apr-02 | 3 | 4,400 | 98.808 | 4.493 | 1.452 | 1.7 |
| 09-Apr-02 | 6 | 1,800 | 97.960 | 4.525 | 2.021 | 1.0 |
| 23-Apr-02 | 12 | 1,900 | 95.767 | 4.432 | 1.733 | 1.3 |
| 23-Apr-02 | 3 | 4,700 | 97.871 | 4.363 | 1.939 | 1.0 |
| 23-Apr-02 | 6 | 1,900 | 98.830 | 4.410 | 1.544 | 1.8 |
| 07-May-02 | 12 | 1,900 | 98.066 | 4.284 | 1.831 | 1.1 |
| 07-May-02 | 3 | 4,700 | 98.855 | 4.313 | 1.942 | 0.7 |
| 07-May-02 | 6 | 1,900 | 95.969 | 4.380 | 2.095 | 0.4 |
| 21-May-02 | 12 | 1,900 | 95.617 | 4.597 | 1.745 | 1.3 |
| 21-May-02 | 3 | 4,700 | 97.828 | 4.453 | 2.028 | 0.7 |
| 21-May-02 | 6 | 1,900 | 98.832 | 4.401 | 1.862 | 0.9 |
| 04-Jun-02 | 12 | 1,900 | 95.863 | 4.501 | 1.916 | 0.9 |
| 04-Jun-02 | 3 | 4,700 | 98.854 | 4.317 | 1.851 | 0.7 |
| 04-Jun-02 | 6 | 1,900 | 98.025 | 4.378 | 2.420 | 0.2 |
| 18-Jun-02 | 12 | 1,900 | 95.804 | 4.392 | 2.212 | 0.8 |
| 18-Jun-02 | 3 | 4,700 | 98.874 | 4.242 | 2.221 | 0.5 |
| 18-Jun-02 | 6 | 1,900 | 97.906 | 4.289 | 2.220 | 0.4 |
| 02-Jul-02 | 12 | 1,800 | 95.750 | 4.629 | 1.891 | 0.4 |
| 02-Jul-02 | 3 | 4,400 | 98.842 | 4.364 | 1.909 | 0.5 |
| 02-Jul-02 | 6 | 1,800 | 97.984 | 4.470 | 2.067 | 0.8 |
| 16-Jul-02 | 12 | 1,800 | 95.753 | 4.448 | 1.714 | 0.5 |
| 16-Jul-02 | 3 | 4,400 | 98.894 | 4.164 | 1.910 | 0.3 |
| 16-Jul-02 | 6 | 1,800 | 97.918 | 4.265 | 2.194 | 0.8 |
| 30-Jul-02 | 12 | 1,900 | 96.121 | 4.209 | 2.045 | 0.5 |
| 30-Jul-02 | 6 | 1,900 | 98.166 | 4.058 | 2.092 | 0.6 |
| 30-Jul-02 | 3 | 4,700 | 98.930 | 4.029 | 2.056 | 0.6 |
| 13-Aug-02 | 12 | 1,800 | 96.078 | 4.093 | 1.822 | 0.7 |
| 13-Aug-02 | 3 | 4,400 | 98.951 | 3.950 | 1.825 | 0.8 |
| 13-Aug-02 | 6 | 1,800 | 98.059 | 3.969 | 2.077 | 0.8 |
| 27-Aug-02 | 12 | 1,800 | 96.394 | 3.901 | 2.228 | 0.4 |
| 27-Aug-02 | 3 | 4,400 | 98.264 | 3.838 | 2.288 | 0.7 |
| 27-Aug-02 | 6 | 1,800 | 98.989 | 3.805 | 1.754 | 0.9 |
| 10-Sep-02 | 12 | 1,800 | 96.742 | 3.377 | 1.957 | 1.3 |
| 10-Sep-02 | 3 | 4,400 | 99.109 | 3.348 | 1.657 | 10.2 |
| 10-Sep-02 | 6 | 1,800 | 98.342 | 3.381 | 1.828 | 2.3 |
| 24-Sep-02 | 12 | 1,800 | 99.191 | 3.039 | 1.802 | 1.1 |
| 24-Sep-02 | 3 | 4,400 | 97.214 | 2.989 | 2.092 | 0.9 |
| 24-Sep-02 | 6 | 1,800 | 98.649 | 2.975 | 2.149 | 0.5 |
| 08-Oct-02 | 12 | 1,900 | 98.591 | 2.866 | 1.969 | 1.1 |
| 08-Oct-02 | 3 | 4,700 | 99.213 | 2.955 | 1.842 | 0.9 |
| 08-Oct-02 | 6 | 1,900 | 97.200 | 2.889 | 1.919 | 0.7 |
| 22-Oct-02 | 12 | 1,900 | 99.323 | 2.540 | 1.852 | 1.7 |
| 22-Oct-02 | 3 | 4,700 | 98.848 | 2.532 | 2.306 | 0.6 |
| 22-Oct-02 | 6 | 1,900 | 97.543 | 2.627 | 2.013 | 1.2 |
| 05-Nov-02 | 12 | 2,000 | 97.739 | 2.320 | 2.086 | 0.8 |
| 05-Nov-02 | 3 | 5,000 | 99.391 | 2.281 | 1.805 | 0.9 |
| 05-Nov-02 | 6 | 2,000 | 98.881 | 2.269 | 1.989 | 0.8 |
| 19-Nov-02 | 12 | 1,900 | 97.620 | 2.543 | 1.514 | 1.7 |
| 19-Nov-02 | 3 | 4,700 | 99.411 | 2.207 | 1.753 | 1.3 |
| 19-Nov-02 | 6 | 1,900 | 98.948 | 2.309 | 2.088 | 0.9 |
| 03-Dec-02 | 12 | 1,800 | 99.453 | 2.048 | 1.831 | 0.9 |
| 03-Dec-02 | 3 | 4,400 | 98.987 | 2.052 | 1.896 | 0.6 |
| 03-Dec-02 | 6 | 1,800 | 97.712 | 2.348 | 1.929 | 0.5 |
| 17-Dec-02 | 12 | 1,700 | 97.797 | 2.349 | 1.814 | 0.6 |
| 17-Dec-02 | 3 | 4,100 | 99.467 | 1.996 | 2.065 | 0.4 |
| 17-Dec-02 | 6 | 1,700 | 99.061 | 2.059 | 1.942 | 0.5 |
| 30-Dec-02 | 12 | 1,600 | 99.490 | 1.911 | 1.799 | 0.9 |
| 30-Dec-02 | 3 | 3,800 | 97.775 | 2.276 | 1.906 | 0.9 |
| 30-Dec-02 | 6 | 1,600 | 99.022 | 1.981 | 1.881 | 1.3 |
| 14-Jan-03 | 12 | 1,700 | 97.973 | 2.151 | 1.706 | 1.3 |
| 14-Jan-03 | 3 | 4,100 | 99.492 | 1.901 | 1.810 | 1.2 |
| 14-Jan-03 | 6 | 1,700 | 99.105 | 1.961 | 1.989 | 0.7 |
| 28-Jan-03 | 12 | 1,900 | 99.475 | 1.966 | 1.935 | 1.0 |
| 28-Jan-03 | 3 | 4,700 | 97.619 | 2.446 | 1.955 | 0.9 |
| 28-Jan-03 | 6 | 1,900 | 98.953 | 2.122 | 2.006 | 0.6 |
| 11-Feb-03 | 12 | 1,700 | 97.673 | 2.484 | 1.842 | 0.8 |
| 11-Feb-03 | 3 | 4,100 | 99.019 | 2.152 | 2.085 | 0.8 |
| 11-Feb-03 | 6 | 1,700 | 99.466 | 2.001 | 1.903 | 0.9 |
| 25-Feb-03 | 12 | 1,900 | 99.447 | 2.070 | 1.747 | 1.0 |
| 25-Feb-03 | 3 | 4,700 | 98.903 | 2.224 | 1.790 | 0.6 |
| 25-Feb-03 | 6 | 1,900 | 97.436 | 2.639 | 1.650 | 1.1 |
| 11-Mar-03 | 12 | 1,900 | 97.158 | 3.050 | 1.601 | 2.0 |
| 11-Mar-03 | 3 | 4,700 | 98.891 | 2.436 | 1.791 | 1.3 |
| 11-Mar-03 | 6 | 1,900 | 99.426 | 2.152 | 1.881 | 0.8 |
| 25-Mar-03 | 12 | 1,900 | 98.659 | 2.725 | 2.058 | 0.7 |
| 25-Mar-03 | 3 | 4,700 | 99.375 | 2.343 | 2.005 | 0.7 |
| 25-Mar-03 | 6 | 1,900 | 96.643 | 3.483 | 2.077 | 0.7 |
| Total | | 213,000 | | | | |

Note: Coverage is defined as the ratio of total bids at auction to the amount auctioned. Tail is defined as the high accepted yield minus the average yield.

Source: Bank of Canada

**Reference Table VIII**

*Fiscal 2002–03 Canadian-Dollar Marketable Bond Program*

| Offering date | Delivery date | Maturity date | Maturing | Gross | Bond repurchase | Net |
|---|---|---|---|---|---|---|
| | | | | ($ millions) | | |
| **Fixed-coupon bonds** | | | | | | |
| **2002** | **2002** | | | | | |
| | April 1 | | 5,450 | – | – | -5,450 |
| April 17 | April 22 | June 1, 2012 | – | 2,400 | 150 | 2,250 |
| | May 1 | | 1,662 | – | – | -1,662 |
| May 1[1] | May 6 | June 1, 2033 | – | 500 | 477 | 23 |
| May 15 | May 21 | September 1, 2007 | – | 2,400 | 500 | 1,900 |
| May 29 | May 31 | December 1, 2004 | – | 3,500 | 700 | 2,800 |
| | June 1 | | 4,000 | – | – | -4,000 |
| June 19[1] | June 25 | June 1, 2012 | – | 500 | 357 | 143 |
| July 10 | July 15 | June 1, 2033 | – | 1,900 | 600 | 1,300 |
| July 17[1] | July 22 | September 1, 2007 | – | 600 | 647 | -47 |
| July 31 | August 6 | June 1, 2012 | – | 2,500 | 600 | 1,900 |
| August 14 | August 19 | September 1, 2007 | – | 2,400 | 473 | 1,927 |
| August 28 | August 30 | December 1, 2004 | – | 3,000 | 700 | 2,300 |
| | September 3 | | 7,330 | – | – | -7,330 |
| September 25[1] | September 30 | June 1, 2012 | – | 600 | 372 | 228 |
| October 9[1] | October 15 | June 1, 2012 | – | 600 | 294 | 306 |
| October 30 | November 4 | June 1, 2013 | – | 2,400 | 600 | 1,800 |
| November 13 | November 18 | September 1, 2008 | – | 2,400 | 246 | 2,154 |
| November 20[1] | November 25 | June 1, 2033 | – | 400 | 390 | 10 |
| November 27 | November 29 | June 1, 2005 | – | 3,500 | 700 | 2,800 |
| | December 2 | | 4,000 | – | – | -4,000 |
| December 11[1] | December 16 | June 1, 2013 | 1,068 | 600 | 329 | -797 |
| December 18[1] | December 23 | September 1, 2008 | – | 400 | 432 | -32 |
| **2003** | **2003** | | | | | |
| January 15 | January 20 | June 1, 2033 | – | 1,700 | 600 | 1,100 |
| January 30[1] | February 3 | June 1, 2005 | 1,717 | 400 | 486 | -1,803 |
| February 5 | February 10 | June 1, 2013 | – | 2,400 | 153 | 2,247 |
| February 19 | February 24 | September 1, 2008 | – | 2,400 | 436 | 1,964 |
| February 26[1] | March 3 | June 1, 2033 | – | 300 | 281 | 19 |
| March 5 | March 7 | June 1, 2005 | – | 3,500 | 608 | 2,892 |
| March 19[1] | March 24 | June 1, 2013 | – | 600 | 443 | 157 |
| March 26[1] | March 31 | September 1, 2008 | – | 400 | 491 | -91 |

**Reference Table VIII** *(cont'd)*

*Fiscal 2002–03 Canadian-Dollar Marketable Bond Program*

| Offering date | Delivery date | Maturity date | Maturing | Gross | Bond repurchase | Net |
|---|---|---|---|---|---|---|
| | | | | ($ millions) | | |
| **Real Return Bonds** | | | | | | |
| **2002** | **2002** | | | | | |
| June 5 | June 10 | December 1, 2031 | – | 400 | – | 400 |
| September 11 | September 16 | December 1, 2031 | – | 300 | – | 300 |
| December 4 | December 9 | December 1, 2031 | – | 400 | – | 400 |
| **2003** | **2003** | | | | | |
| March 12 | March 17 | December 1, 2031 | – | 300 | – | 300 |
| **Total fiscal year 2002–2003** | | | **25,227** | **43,700** | **12,065** | **6,408** |

* Maturing date

Source: Bank of Canada.

[1] Buyback on a switch basis.

**Reference Table IX**

*Fiscal 2002–2003 Marketable Bond Auction Results*

| Auction date | Term | Maturity date | Coupon rate | Issue amount | Average price | Average yield | Auction coverage | Tail |
|---|---|---|---|---|---|---|---|---|
| | (years) | | (%) | ($ millions) | ($) | (%) | | (basis points) |
| 17-Apr-02 | 10 | 1-Jun-12 | 5.25 | 2,400 | 96.445 | 5.717 | 2.41 | 0.8 |
| 15-May-02 | 5 | 1-Sep-07 | 4.50 | 2,400 | 96.136 | 5.348 | 2.43 | 1.0 |
| 29-May-02 | 2 | 1-Dec-04 | 4.25 | 3,500 | 99.503 | 4.462 | 2.34 | 0.8 |
| 05-Jun-02 | 30 | 1-Dec-31 | 4.00* | 400 | 108.954 | 3.510 | 3.26 | n/a |
| 10-Jul-02 | 30 | 1-Jun-33 | 5.75 | 1,900 | 99.978 | 5.751 | 2.36 | 0.9 |
| 31-Jul-02 | 10 | 1-Jun-12 | 5.25 | 2,500 | 99.356 | 5.334 | 2.64 | 1.1 |
| 14-Aug-02 | 5 | 1-Sep-07 | 4.50 | 2,400 | 100.936 | 4.291 | 2.43 | 0.8 |
| 28-Aug-02 | 2 | 1-Dec-04 | 4.25 | 3,000 | 101.109 | 3.730 | 2.31 | 0.5 |
| 11-Sep-02 | 30 | 1-Dec-31 | 4.00* | 300 | 112.710 | 3.317 | 3.08 | n/a |
| 30-Oct-02 | 10 | 1-Jun-13 | 5.25 | 2,400 | 99.476 | 5.316 | 2.43 | 1.0 |
| 13-Nov-02 | 5 | 1-Sep-08 | 4.25 | 2,400 | 98.780 | 4.493 | 2.43 | 0.5 |
| 27-Nov-02 | 2 | 1-Jun-05 | 3.50 | 3,500 | 99.500 | 3.711 | 2.25 | 0.9 |
| 04-Dec-02 | 30 | 1-Dec-31 | 4.00* | 400 | 110.807 | 3.410 | 3.00 | n/a |
| 15-Jan-03 | 30 | 1-Jun-33 | 5.75 | 1,700 | 104.162 | 5.467 | 2.74 | 0.6 |
| 05-Feb-03 | 10 | 1-Jun-13 | 5.25 | 2,400 | 100.848 | 5.142 | 2.49 | 0.3 |
| 19-Feb-03 | 5 | 1-Sep-08 | 4.25 | 2,400 | 98.710 | 4.517 | 2.49 | 0.3 |
| 05-Mar-03 | 2 | 1-Jun-05 | 3.50 | 3,500 | 99.588 | 3.692 | 2.42 | 0.6 |
| 12-Mar-03 | 30 | 1-Dec-31 | 4.00* | 300 | 124.267 | 2.769 | 3.31 | n/a |
| **Total** | | | | **37,800** | | | | |

Note: Coverage is defined as the ratio of total bids at auction to the amount auctioned. Tail is defined as the high accepted yield minus the average yield.

* Real return bonds.

Source: Department of Finance.

**Reference Table X**

*Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2003*

| Maturity date | Amount ($ millions) | Coupon rate (%) | Maturity date | Amount ($ millions) | Coupon rate (%) |
|---|---|---|---|---|---|
| **Fixed-coupon** | | | | | |
| 01-Jun-03 | 1,124 | 5.75 | 01-Jun-08 | 9,030 | 6.00 |
| 01-Jun-03 | 6,505 | 7.25 | 01-Jun-08 | 3,258 | 10.00 |
| 01-Sep-03 | 8,230 | 5.25 | 01-Sep-08 | 5,600 | 4.25 |
| 01-Oct-03 | 452 | 9.50 | 01-Oct-08 | 425 | 11.75 |
| 01-Dec-03 | 5,907 | 5.00 | 01-Mar-09 | 246 | 11.50 |
| 01-Dec-03 | 8,579 | 7.50 | 01-Jun-09 | 9,380 | 5.50 |
| 01-Feb-04 | 929 | 10.25 | 01-Jun-09 | 669 | 11.00 |
| 01-Jun-04 | 7,000 | 3.50 | 01-Oct-09 | 330 | 10.75 |
| 01-Jun-04 | 7,900 | 6.50 | 01-Mar-10 | 89 | 9.75 |
| 01-Jun-04 | 541 | 13.50 | 01-Jun-10 | 10,400 | 5.50 |
| 01-Sep-04 | 10,377 | 5.00 | 01-Jun-10 | 2,473 | 9.50 |
| 01-Oct-04 | 274 | 10.50 | 01-Oct-10 | 142 | 8.75 |
| 01-Dec-04 | 6,500 | 4.25 | 01-Mar-11 | 710 | 9.00 |
| 01-Dec-04 | 7,700 | 9.00 | 01-Jun-11 | 15,000 | 6.00 |
| 01-Mar-05 | 497 | 12.00 | 01-Jun-11 | 669 | 8.50 |
| 01-Jun-05 | 7,400 | 3.50 | 01-Jun-12 | 11,600 | 5.25 |
| 01-Sep-05 | 10,920 | 6.00 | 01-Jun-13 | 6,000 | 10.25 |
| 01-Sep-05 | 1,065 | 12.25 | 15-Mar-14 | 2,169 | 11.25 |
| 01-Dec-05 | 6,548 | 8.75 | 01-Jun-15 | 1,232 | 10.50 |
| 01-Mar-06 | 276 | 12.75 | 15-Mar-21 | 1,392 | 10.50 |
| 01-Sep-06 | 10,000 | 5.75 | 01-Jun-21 | 2,079 | 9.75 |
| 01-Oct-06 | 771 | 14.00 | 01-Jun-22 | 899 | 9.25 |
| 01-Dec-06 | 7,040 | 7.00 | 01-Jun-23 | 8,054 | 8.00 |
| 01-Mar-07 | 205 | 13.75 | 01-Jun-25 | 8,738 | 9.00 |
| 01-Jun-07 | 8,806 | 7.25 | 01-Jun-27 | 9,323 | 8.00 |
| 01-Sep-07 | 10,400 | 4.50 | 01-Jun-29 | 13,900 | 5.75 |
| 01-Oct-07 | 485 | 13.00 | 01-Jun-33 | 9,200 | 5.75 |
| 01-Mar-08 | 624 | 12.75 | **Total** | **270,062** | |

**Reference Table X** *(cont'd)*

*Outstanding Government of Canada Canadian-Dollar Marketable Bonds as at March 31, 2003*

| Maturity date | Amount | Coupon rate |
|---|---|---|
| | ($ millions) | (%) |
| **Real return bonds** | | |
| 01-Dec-2021 | 5,175 | 4.25 |
| 01-Dec-2026 | 5,250 | 4.25 |
| 01-Dec-2031 | 5,800 | 4.00 |
| **Total**[1] | **16,225** | |

[1] Real return bond figures show gross issue amount only—the consumer price index adjustment is not shown here.

Source: Bank of Canada.

## Reference Table XI

*Government of Canada Swaps Outstanding as at March 31, 2003*

### Domestic interest-rate swaps

| Maturity date | Coupon[1] | Notional amount |
|---|---|---|
| | (%) | ($ millions) |
| 01-Feb-2004 | 10.25 | 50 |
| **Total** | | **50** |

### Foreign interest-rate swaps

| Maturity date | Coupon[1] | Notional amount |
|---|---|---|
| | (%) | (US$ millions) |
| 19-Nov-2007 | 4.00 | 25 |
| 05-Nov-2008 | 5.25 | 200 |
| 05-Nov-2008 | 5.25 | 500 |
| 05-Nov-2008 | 5.25 | 500 |
| **Total** | | **1,225** |

### Cross-currency swaps of foreign obligations

| Maturity date | Notional amount |
|---|---|
| | (US$ millions) |
| 16-Jul-2003 | 65 |
| 26-Nov-2004 | 495 |
| 26-Nov-2004 | 341 |
| 30-Nov-2004 | 63 |
| 30-Nov-2004 | 25 |
| 22-Dec-2004 | 76 |
| 03-Oct-2007 | 319 |
| 31-Jan-2008 | 44 |
| **Total** | **1,428** |

[1] Refers to the coupon of the underlying bond that was swapped.

**Reference Table XI** *(cont'd)*
*Government of Canada Swaps Outstanding as at March 31, 2003*

| Cross-currency swaps of domestic obligations | | | Cross-currency swaps of domestic obligations | | |
|---|---|---|---|---|---|
| Maturity date | Notional amount (US$ millions) | Currency paid | Maturity date | Notional amount (US$ millions) | Currency paid |
| 01-Sep-03 | 55.00 | EUR | 01-Jun-04 | 55.00 | EUR |
| 01-Sep-03 | 55.00 | EUR | 01-Jun-04 | 55.00 | EUR |
| 02-Sep-03 | 50.00 | USD | 01-Jun-04 | 55.00 | EUR |
| 02-Sep-03 | 50.00 | USD | 01-Jun-04 | 55.00 | EUR |
| 02-Sep-03 | 50.00 | USD | 01-Jun-04 | 100.00 | USD |
| 01-Oct-03 | 76.00 | EUR | 01-Jun-04 | 50.00 | USD |
| 01-Oct-03 | 109.00 | EUR | 01-Jun-04 | 100.00 | USD |
| 01-Oct-03 | 65.00 | USD | 01-Jun-04 | 50.00 | USD |
| 01-Dec-03 | 55.00 | EUR | 01-Jun-04 | 50.00 | USD |
| 01-Dec-03 | 55.00 | EUR | 01-Sep-04 | 55.00 | EUR |
| 01-Dec-03 | 55.00 | EUR | 01-Sep-04 | 61.00 | EUR |
| 01-Dec-03 | 325.00 | USD | 01-Sep-04 | 55.00 | EUR |
| 01-Dec-03 | 65.00 | USD | 01-Sep-04 | 55.00 | EUR |
| 01-Dec-03 | 65.00 | USD | 01-Oct-04 | 55.00 | EUR |
| 01-Dec-03 | 65.00 | USD | 01-Oct-04 | 50.00 | USD |
| 01-Feb-04 | 38.00 | EUR | 01-Oct-04 | 75.00 | USD |
| 01-Feb-04 | 55.00 | EUR | 01-Oct-04 | 111.00 | USD |
| 01-Feb-04 | 55.00 | EUR | 01-Oct-04 | 55.00 | USD |
| 01-Feb-04 | 55.00 | EUR | 01-Dec-04 | 55.00 | EUR |
| 01-Feb-04 | 55.00 | EUR | 01-Dec-04 | 82.00 | EUR |
| 01-Feb-04 | 100.00 | USD | 01-Mar-05 | 55.00 | EUR |
| 01-Feb-04 | 75.00 | USD | 01-Mar-05 | 250.00 | USD |
| 01-Feb-04 | 100.00 | USD | 01-Mar-05 | 65.00 | USD |
| 01-Feb-04 | 100.00 | USD | 01-Mar-05 | 250.00 | USD |
| 01-Feb-04 | 50.00 | USD | 01-Sep-05 | 55.00 | EUR |
| 01-Feb-04 | 50.00 | USD | 01-Sep-05 | 55.00 | EUR |
| 01-Feb-04 | 50.00 | USD | 01-Sep-05 | 33.00 | EUR |
| 01-Jun-04 | 82.00 | EUR | 01-Sep-05 | 33.00 | EUR |
| 01-Jun-04 | 55.00 | EUR | 01-Sep-05 | 55.00 | EUR |
| 01-Jun-04 | 55.00 | EUR | 01-Sep-05 | 82.00 | EUR |
| 01-Jun-04 | 82.00 | EUR | 01-Sep-05 | 82.00 | EUR |
| 01-Jun-04 | 55.00 | EUR | 01-Sep-05 | 82.00 | EUR |
| 01-Jun-04 | 55.00 | EUR | 01-Sep-05 | 82.00 | EUR |

**Reference Table XI** *(cont'd)*

*Government of Canada Swaps Outstanding as at March 31, 2003*

| Cross-currency swaps of domestic obligations | | | Cross-currency swaps of domestic obligations | | |
|---|---|---|---|---|---|
| Maturity date | Notional amount | Currency paid | Maturity date | Notional amount | Currency paid |
| | (US$ millions) | | | (US$ millions) | |
| 01-Sep-05 | 82.00 | EUR | 01-Sep-06 | 55.00 | EUR |
| 01-Sep-05 | 100.00 | USD | 01-Oct-06 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Oct-06 | 50.00 | USD |
| 01-Dec-05 | 55.00 | EUR | 01-Oct-06 | 50.00 | USD |
| 01-Dec-05 | 55.00 | EUR | 01-Dec-06 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Dec-06 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Dec-06 | 82.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Dec-06 | 82.00 | EUR |
| 01-Dec-05 | 82.00 | EUR | 01-Dec-06 | 55.00 | USD |
| 01-Dec-05 | 55.00 | EUR | 01-Mar-07 | 27.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 109.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 250.00 | USD |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 250.00 | USD |
| 01-Dec-05 | 55.00 | EUR | 01-Jun-07 | 250.00 | USD |
| 01-Dec-05 | 55.00 | EUR | 01-Oct-07 | 55.00 | EUR |
| 01-Dec-05 | 55.00 | EUR | 01-Oct-07 | 55.00 | EUR |
| 01-Dec-05 | 82.00 | EUR | 01-Oct-07 | 55.00 | EUR |
| 01-Dec-05 | 82.00 | EUR | 01-Oct-07 | 27.00 | EUR |
| 01-Dec-05 | 50.00 | USD | 01-Mar-08 | 82.00 | EUR |
| 01-Dec-05 | 50.00 | USD | 01-Mar-08 | 55.00 | EUR |
| 01-Dec-05 | 50.00 | USD | 01-Mar-08 | 75.00 | USD |
| 01-Dec-05 | 54.00 | USD | 01-Mar-08 | 100.00 | USD |
| 01-Dec-05 | 500.00 | USD | 01-Mar-08 | 50.00 | USD |
| 01-Mar-06 | 55.00 | EUR | 01-Mar-08 | 200.00 | USD |
| 01-Mar-06 | 82.00 | EUR | 01-Mar-08 | 50.00 | USD |
| 01-Mar-06 | 82.00 | EUR | 01-Mar-08 | 50.00 | USD |
| 01-Mar-06 | 55.00 | EUR | 01-Jun-08 | 55.00 | EUR |
| 01-Mar-06 | 55.00 | EUR | 01-Jun-08 | 55.00 | EUR |
| 01-Mar-06 | 50.00 | USD | 01-Jun-08 | 55.00 | EUR |
| 01-Mar-06 | 54.00 | USD | 01-Jun-08 | 55.00 | EUR |

**Reference Table XI** *(cont'd)*
*Government of Canada Swaps Outstanding as at March 31, 2003*

| Cross-currency swaps of domestic obligations | | | Cross-currency swaps of domestic obligations | | |
|---|---|---|---|---|---|
| Maturity date | Notional amount | Currency paid | Maturity date | Notional amount | Currency paid |
| | (US$ millions) | | | (US$ millions) | |
| 01-Jun-08 | 250.00 | USD | 01-Jun-09 | 50.00 | USD |
| 01-Jun-08 | 100.00 | USD | 01-Jun-09 | 70.00 | USD |
| 01-Jun-08 | 100.00 | USD | 01-Jun-09 | 100.00 | USD |
| 01-Jun-08 | 100.00 | USD | 01-Jun-09 | 50.00 | USD |
| 01-Jun-08 | 50.00 | USD | 01-Jun-09 | 100.00 | USD |
| 01-Jun-08 | 100.00 | USD | 01-Jun-09 | 70.00 | USD |
| 01-Jun-08 | 50.00 | USD | 01-Jun-09 | 65.00 | USD |
| 01-Jun-08 | 50.00 | USD | 01-Oct-09 | 109.00 | EUR |
| 01-Oct-08 | 82.00 | EUR | 01-Oct-09 | 55.00 | EUR |
| 01-Oct-08 | 82.00 | EUR | 01-Oct-09 | 55.00 | EUR |
| 01-Oct-08 | 55.00 | EUR | 01-Oct-09 | 55.00 | EUR |
| 01-Oct-08 | 55.00 | EUR | 01-Oct-09 | 55.00 | EUR |
| 01-Oct-08 | 70.00 | USD | 01-Oct-09 | 55.00 | EUR |
| 01-Oct-08 | 70.00 | USD | 01-Oct-09 | 82.00 | EUR |
| 01-Oct-08 | 50.00 | USD | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 82.00 | EUR | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 55.00 | EUR | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 70.00 | USD | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 65.00 | USD | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 50.00 | USD | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 75.00 | USD | 01-Oct-09 | 55.00 | EUR |
| 01-Mar-09 | 50.00 | USD | 01-Oct-09 | 82.00 | EUR |
| 01-Mar-09 | 50.00 | USD | 01-Oct-09 | 81.00 | USD |
| 01-Mar-09 | 100.00 | USD | 01-Oct-09 | 81.00 | USD |
| 01-Mar-09 | 75.00 | USD | 01-Oct-09 | 70.00 | USD |
| 01-Jun-09 | 55.00 | EUR | 01-Oct-09 | 83.00 | USD |
| 01-Jun-09 | 82.00 | EUR | 01-Oct-09 | 75.00 | USD |
| 01-Jun-09 | 55.00 | EUR | 01-Mar-10 | 55.00 | EUR |
| 01-Jun-09 | 82.00 | EUR | 01-Mar-10 | 55.00 | EUR |
| 01-Jun-09 | 82.00 | EUR | 01-Mar-10 | 55.00 | EUR |
| 01-Jun-09 | 82.00 | EUR | 01-Mar-10 | 55.00 | EUR |
| 01-Jun-09 | 55.00 | EUR | 01-Mar-10 | 82.00 | EUR |
| 01-Jun-09 | 82.00 | EUR | 01-Jun-10 | 55.00 | EUR |

Reference Table XI *(cont'd)*

*Government of Canada Swaps Outstanding as at March 31, 2003*

| Cross-currency swaps of domestic obligations | | | Cross-currency swaps of domestic obligations | | |
|---|---|---|---|---|---|
| Maturity date | Notional amount (US$ millions) | Currency paid | Maturity date | Notional amount (US$ millions) | Currency paid |
| 01-Jun-10 | 55.00 | EUR | 01-Oct-10 | 82.00 | EUR |
| 01-Jun-10 | 44.00 | EUR | 01-Oct-10 | 50.00 | USD |
| 01-Jun-10 | 33.00 | EUR | 01-Mar-11 | 75.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Mar-11 | 75.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Mar-11 | 75.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Mar-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Mar-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 55.00 | EUR |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 55.00 | EUR |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 82.00 | EUR |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 75.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 50.00 | USD |
| 01-Jun-10 | 55.00 | EUR | 01-Jun-11 | 50.00 | USD |
| 01-Jun-10 | 68.00 | JPY | 01-Jun-11 | 50.00 | USD |
| 01-Oct-10 | 44.00 | EUR | 01-Jun-12 | 55.00 | EUR |
| 01-Oct-10 | 82.00 | EUR | 01-Jun-12 | 55.00 | EUR |
| 01-Oct-10 | 55.00 | EUR | 01-Jun-12 | 50.00 | USD |
| 01-Oct-10 | 55.00 | EUR | 01-Jun-12 | 50.00 | USD |
| 01-Oct-10 | 55.00 | EUR | 01-Jun-12 | 50.00 | USD |
| 01-Oct-10 | 55.00 | EUR | 01-Jun-12 | 50.00 | USD |
| 01-Oct-10 | 82.00 | EUR | 01-Jun-12 | 50.00 | USD |
| 01-Oct-10 | 82.00 | EUR | Total | 17,539.00 | |

Note: Numbers may not add due to rounding.

Source: Department of Finance.

Reference Table XII

*Bond Buyback Program—Operations 2002–2003*

| Buyback date | Maturity date | Coupon | Repurchased amount |
|---|---|---|---|
| | | (%) | ($ millions) |
| Buyback on cash basis | | | |
| 17-Apr-02 | 01-Mar-09 | 11.5 | 2 |
| | 01-Jun-09 | 5.5 | 20 |
| | 01-Oct-09 | 10.75 | 20 |
| | 01-Mar-10 | 9.75 | 7 |
| | 01-Oct-10 | 8.75 | 9 |
| | 01-Mar-11 | 9 | 56 |
| | 15-Mar-14 | 10.25 | 36 |
| | Total | | 150 |
| 15-May-02 | 01-Mar-05 | 12 | 9 |
| | 01-Dec-05 | 8.75 | 213 |
| | 01-Mar-06 | 12.5 | 6 |
| | 01-Oct-06 | 14 | 21 |
| | 01-Dec-06 | 7 | 155 |
| | 01-Mar-07 | 13.75 | 1 |
| | 01-Jun-07 | 7.25 | 82 |
| | 01-Oct-07 | 13 | 3 |
| | 01-Mar-09 | 11.5 | 4 |
| | 01-Oct-09 | 10.75 | 5 |
| | Total | | 499 |
| 29-May-02 | 01-Jun-03 | 7.25 | 73 |
| | 01-Sep-03 | 5.25 | 160 |
| | 01-Feb-04 | 10.25 | 2 |
| | 01-Sep-04 | 5 | 15 |
| | 01-Dec-05 | 8.75 | 375 |
| | 01-Dec-06 | 7 | 75 |
| | Total | | 700 |
| 10-Jul-02 | 01-Jun-21 | 9.75 | 296 |
| | 01-Jun-22 | 9.25 | 304 |
| | Total | | 600 |
| 31-Jul-02 | 01-Jun-09 | 11 | 2 |
| | 01-Mar-11 | 9 | 23 |
| | 15-Mar-14 | 10.25 | 317 |
| | 01-Jun-15 | 11.25 | 221 |
| | 15-Mar-21 | 10.5 | 32 |
| | 01-Jun-21 | 9.75 | 1 |
| | 01-Jun-22 | 9.25 | 4 |
| | Total | | 600 |
| 14-Aug-02 | 01-Dec-05 | 8.75 | 230 |
| | 01-Mar-06 | 12.5 | 2 |
| | 01-Dec-06 | 7 | 175 |
| | 01-Jun-07 | 7.25 | 60 |
| | 01-Oct-08 | 11.75 | 3 |
| | 01-Mar-09 | 11.5 | 3 |
| | Total | | 473 |
| 28-Aug-02 | 01-Oct-04 | 10.5 | 5 |
| | 01-Mar-05 | 12 | 25 |
| | 01-Dec-05 | 8.75 | 279 |
| | 01-Mar-06 | 12.5 | 7 |
| | 01-Dec-06 | 7 | 385 |
| | Total | | 701 |
| 30-Oct-02 | 15-Mar-14 | 10.25 | 63 |
| | 01-Jun-15 | 11.25 | 65 |
| | 01-Jun-21 | 9.75 | 433 |
| | 01-Jun-22 | 9.25 | 39 |
| | Total | | 600 |
| 13-Nov-02 | 01-Dec-06 | 7 | 149 |
| | 01-Jun-07 | 7.25 | 30 |
| | 01-Jun-08 | 6 | 50 |
| | 01-Oct-08 | 11.75 | 3 |
| | 01-Mar-09 | 11.5 | 6 |
| | 01-Jun-09 | 11 | 2 |
| | 01-Oct-09 | 10.75 | 5 |
| | Total | | 246 |

Reference Table XII *(cont'd)*
*Bond Buyback Program—Operations 2002–2003*

| Buyback date | Maturity date | Coupon | Repurchased amount |
|---|---|---|---|
| | | (%) | ($ millions) |
| 27-Nov-02 | 01-Feb-04 | 10.25 | 150 |
| | 01-Sep-04 | 5 | 82 |
| | 01-Oct-04 | 10.5 | 15 |
| | 01-Mar-05 | 12 | 44 |
| | 01-Dec-05 | 8.75 | 355 |
| | 01-Mar-06 | 12.5 | 3 |
| | 01-Dec-06 | 7 | 51 |
| | **Total** | | **700** |
| 15-Jan-03 | 15-Mar-21 | 10.5 | 40 |
| | 01-Jun-21 | 9.75 | 455 |
| | 01-Jun-22 | 9.25 | 65 |
| | 01-Jun-25 | 9 | 40 |
| | **Total** | | **600** |
| 05-Feb-03 | 01-Mar-11 | 9 | 39 |
| | 15-Mar-21 | 10.5 | 47 |
| | 01-Jun-21 | 9.75 | 17 |
| | 01-Jun-22 | 9.25 | 50 |
| | **Total** | | **153** |
| 19-Feb-03 | 01-Dec-06 | 7 | 90 |
| | 01-Mar-07 | 13.75 | 28 |
| | 01-Jun-07 | 7.25 | 150 |
| | 01-Oct-07 | 13 | 32 |
| | 01-Mar-08 | 12.75 | 3 |
| | 01-Jun-08 | 6 | 120 |
| | 01-Oct-08 | 11.75 | 13 |
| | **Total** | | **436** |
| 05-Mar-03 | 01-Sep-04 | 5 | 25 |
| | 01-Mar-05 | 12 | 42 |
| | 01-Sep-05 | 6 | 180 |
| | 01-Mar-06 | 12.5 | 13 |
| | 01-Dec-06 | 7 | 271 |
| | 01-Jun-07 | 7.25 | 127 |
| | **Total** | | **608** |
| **Total buyback on cash basis** | | | **7,066** |
| **Buyback on switch basis** | | | |
| 01-May-02 | 15-Mar-21 | 10.5 | 60 |
| | 01-Jun-21 | 9.75 | 172 |
| | 01-Jun-22 | 9.25 | 102 |
| | 01-Jun-23 | 8 | 92 |
| | 01-Jun-25 | 9 | 52 |
| | **Total** | | **477** |
| 19-Jun-02 | 01-Oct-08 | 11.75 | 6 |
| | 01-Oct-09 | 10.75 | 27 |
| | 01-Mar-10 | 9.75 | 29 |
| | 01-Oct-10 | 8.75 | 8 |
| | 01-Mar-11 | 9 | 58 |
| | 01-Jun-15 | 11.25 | 230 |
| | **Total** | | **357** |
| 17-Jul-02 | 01-Oct-06 | 14 | 9 |
| | 01-Dec-06 | 7 | 637 |
| | **Total** | | **647** |
| 25-Sep-02 | 01-Oct-09 | 10.75 | 4 |
| | 01-Mar-11 | 9 | 10 |
| | 01-Jun-15 | 11.25 | 358 |
| | **Total** | | **372** |

**Reference Table XII** *(cont'd)*
*Bond Buyback Program—Operations 2002–2003*

| Buyback date | Maturity date | Coupon | Repurchased amount |
|---|---|---|---|
| | | (%) | ($ millions) |
| 09-Oct-02 | 01-Jun-21 | 9.75 | 294 |
| | **Total** | | **294** |
| 20-Nov-02 | 15-Mar-21 | 10.5 | 20 |
| | 01-Jun-21 | 9.75 | 111 |
| | 01-Jun-22 | 9.25 | 100 |
| | 01-Jun-23 | 8 | 49 |
| | 01-Jun-25 | 9 | 40 |
| | 01-Jun-27 | 8 | 70 |
| | **Total** | | **390** |
| 11-Dec-02 | 01-Mar-10 | 9.75 | 24 |
| | 01-Jun-10 | 9.5 | 2 |
| | 01-Mar-11 | 9 | 10 |
| | 15-Mar-21 | 10.5 | 103 |
| | 01-Jun-21 | 9.75 | 120 |
| | 01-Jun-22 | 9.25 | 70 |
| | **Total** | | **329** |
| 18-Dec-02 | 01-Dec-06 | 7 | 122 |
| | 01-Jun-07 | 7.25 | 245 |
| | 01-Mar-09 | 11.5 | 3 |
| | 01-Oct-09 | 10.75 | 63 |
| | **Total** | | **432** |
| 30-Jan-03 | 01-Sep-04 | 5 | 351 |
| | 01-Oct-04 | 10.5 | 3 |
| | 01-Mar-05 | 12 | 98 |
| | 01-Mar-06 | 12.5 | 28 |
| | 01-Oct-06 | 14 | 2 |
| | 01-Oct-07 | 13 | 4 |
| | **Total** | | **486** |
| 26-Feb-03 | 15-Mar-21 | 10.5 | 29 |
| | 01-Jun-21 | 9.75 | 10 |
| | 01-Jun-23 | 8 | 5 |
| | 01-Jun-25 | 9 | 30 |
| | 01-Jun-27 | 8 | 207 |
| | **Total** | | **281** |
| 19-Mar-03 | 01-Jun-10 | 5.5 | 70 |
| | 01-Oct-10 | 8.75 | 10 |
| | 01-Mar-11 | 9 | 25 |
| | 15-Mar-14 | 10.25 | 51 |
| | 01-Jun-15 | 11.25 | 267 |
| | 15-Mar-21 | 10.5 | 20 |
| | **Total** | | **443** |
| 26-Mar-03 | 01-Dec-06 | 7 | 444 |
| | 01-Oct-07 | 13 | 2 |
| | 01-Oct-08 | 11.75 | 10 |
| | 01-Oct-09 | 10.75 | 35 |
| | **Total** | | **491** |
| **Total buyback on switch basis** | | | **5,000** |
| **Cash management bond buyback** | | | |
| 09-Apr-02 | 01-Jun-02 | 5.75 | 45 |
| | 01-Sep-02 | 5.5 | 388 |
| | 01-Dec-02 | 6 | 567 |
| | **Total** | | **1,000** |
| 23-Apr-02 | 01-Jun-02 | 5.75 | 1,000 |
| | **Total** | | **1,000** |

**Reference Table XII** *(cont'd)*
*Bond Buyback Program—Operations 2002–2003*

| Buyback date | Maturity date | Coupon | Repurchased amount |
|---|---|---|---|
| | | (%) | ($ millions) |
| 07-May-02 | 01-Jun-02 | 5.75 | 117 |
| | **Total** | | **117** |
| 04-Jun-02 | 01-Sep-02 | 5.5 | 75 |
| | 01-Dec-02 | 6 | 114 |
| | 01-Jun-03 | 5.75 | 311 |
| | **Total** | | **500** |
| 02-Jul-02 | 01-Sep-02 | 5.5 | 500 |
| | **Total** | | **500** |
| 16-Jul-02 | 01-Sep-02 | 5.5 | 699 |
| | 01-Jun-03 | 5.75 | 140 |
| | **Total** | | **839** |
| 30-Jul-02 | 01-Sep-02 | 5.5 | 530 |
| | 01-Jun-03 | 5.75 | 268 |
| | 01-Jun-03 | 7.25 | 202 |
| | **Total** | | **1,000** |
| 10-Sep-02 | 01-Dec-02 | 6 | 30 |
| | 01-Jun-03 | 7.25 | 53 |
| | 01-Sep-03 | 5.25 | 315 |
| | **Total** | | **398** |
| 24-Sep-02 | 01-Sep-03 | 5.25 | 280 |
| | 01-Dec-03 | 5 | 25 |
| | 01-Dec-03 | 7.5 | 51 |
| | **Total** | | **356** |
| 08-Oct-02 | 01-Jun-03 | 5.75 | 1,000 |
| | **Total** | | **1,000** |
| 22-Oct-02 | 01-Jun-03 | 5.75 | 810 |
| | 01-Sep-03 | 5.25 | 185 |
| | 01-Dec-03 | 7.5 | 5 |
| | **Total** | | **1,000** |
| 05-Nov-02 | 01-Jun-03 | 5.75 | 0 |
| | 01-Jun-03 | 7.25 | 0 |
| | 01-Sep-03 | 5.25 | 0 |
| | 01-Dec-03 | 5 | 0 |
| | 01-Dec-03 | 7.5 | 0 |
| | **Total** | | **0** |
| 19-Nov-02 | 01-Dec-03 | 5 | 216 |
| | 01-Dec-03 | 7.5 | 55 |
| | **Total** | | **271** |
| 03-Dec-02 | 01-Dec-03 | 5 | 28 |
| | 01-Dec-03 | 7.5 | 28 |
| | **Total** | | **56** |
| 17-Dec-02 | 01-Jun-03 | 5.75 | 500 |
| | 01-Dec-03 | 5 | 500 |
| | **Total** | | **1,000** |

**Reference Table XII** *(cont'd)*
*Bond Buyback Program—Operations 2002–2003*

| Buyback date | Maturity date | Coupon | Repurchased amount |
|---|---|---|---|
| | | (%) | ($ millions) |
| **14-Jan-03** | 01-Jun-03 | 5.75 | 1,000 |
| | **Total** | | **1,000** |
| **28-Jan-03** | 01-Jun-03 | 5.75 | 420 |
| | 01-Jun-03 | 7.25 | 44 |
| | 01-Sep-03 | 5.25 | 36 |
| | **Total** | | **500** |
| **11-Feb-03** | 01-Jun-03 | 5.75 | 977 |
| | 01-Jun-03 | 7.25 | 23 |
| | **Total** | | **1,000** |
| **25-Feb-03** | 01-Jun-03 | 5.75 | 300 |
| | 01-Sep-03 | 5.25 | 50 |
| | **Total** | | **350** |
| **11-Mar-03** | 01-Jun-03 | 5.75 | 150 |
| | 01-Sep-03 | 5.25 | 57 |
| | 01-Dec-03 | 5 | 214 |
| | 01-Dec-0 | 37.5 | 79 |
| | **Total** | | **500** |
| **25-Mar-03** | 01-Sep-03 | 5.25 | 387 |
| | 01-Dec-03 | 5 | 110 |
| | 01-Dec-03 | 7.5 | 3 |
| | **Total** | | **500** |
| **Total cash management bond buyback** | | | **12,887** |

Source: Department of Finance

**Reference Table XIII**

*Canada Savings Bonds and Canada Premium Bonds, Fiscal 1983–84 to Fiscal 2002–2003*

| Fiscal year | Gross sales | Net change | Outstanding at fiscal year end |
|---|---|---|---|
| | | ($ millions) | |
| 1983–84 | 11,584 | 5,650 | 38,403 |
| 1984–85 | 12,743 | 3,764 | 42,167 |
| 1985–86 | 15,107 | 2,440 | 44,607 |
| 1986–87 | 9,191 | -22 | 44,585 |
| 1987–88 | 17,450 | 8,921 | 53,506 |
| 1988–89 | 14,962 | -5,456 | 48,050 |
| 1989–90 | 9,338 | -6,813 | 41,237 |
| 1990–91 | 6,720 | -6,500 | 34,737 |
| 1991–92 | 9,588 | 1,151 | 35,888 |
| 1992–93 | 9,235 | -1,172 | 34,716 |
| 1993–94 | 5,364 | -3,089 | 31,627 |
| 1994–95 | 7,506 | -96 | 31,531 |
| 1995–96 | 4,612 | 10 | 31,541 |
| 1996–97 | 5,747 | 2,050 | 33,591 |
| 1997–98 | 4,951 | -2,796 | 30,795 |
| 1998–99 | 4,844 | -2,187 | 28,608 |
| 1999–00 | 2,669 | -1,510 | 27,098 |
| 2000–01 | 3,188 | -531 | 26,567 |
| 2001–02 | 2,700 | -2,338 | 24,229 |
| 2002–03 | 3,500 | -1,351 | 22,878 |

Note: Figures are in accordance with Bank of Canada audited reports, which may vary from Public Accounts reports due to differences in classification.

Source: Bank of Canada

## Reference Table XIV

*Crown Corporation Borrowings as at March 31, 2003*

| Borrowings from the market Corporation | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ($ millions) | | | | | | |
| Export Development Corporation | 5,685 | 6,220 | 6,983 | 7,793 | 7,515 | 7,673 | 7,820 | 10,077 | 12,967 | 16,888 | 18,406 | 20,481 | 20,375 |
| Canadian Wheat Board[1] | 6,449 | 7,323 | 6,966 | 7,283 | 7,321 | 6,377 | 6,474 | 6,698 | 6,786 | 542 | 425 | 397 | 378 |
| Business Development Bank of Canada | 2,271 | 2,249 | 2,352 | 2,602 | 2,723 | 3,045 | 3,371 | 3,839 | 4,223 | 4,723 | 5,102 | 5,726 | 6,263 |
| Farm Credit Corporation | 1,128 | 813 | 797 | 863 | 990 | 1,582 | 1,926 | 3,026 | 4,317 | 5,083 | 5,695 | 7,096 | 8,082 |
| Canadian National[1] | 1,861 | 1,803 | 1,905 | 2,249 | 2,331 | – | – | – | v | – | – | – | – |
| Canada Mortgage and Housing Corporation | – | 96 | 152 | 1,573 | 3,630 | 5,906 | 7,866 | 9,934 | 10,633 | 10,801 | 11,672 | 11,372 | 11,091 |
| Canada Development Investment Corporation | 612 | 713 | 594 | 473 | – | – | – | – | – | – | – | – | – |
| Petro-Canada Ltd. | 1,656 | 980 | 455 | 501 | 504 | 490 | 432 | 443 | 471 | 338 | – | – | – |
| Petro-Canada[1] | 718 | – | – | – | – | – | – | – | – | – | – | – | – |
| Canada Ports Corporation | – | 200 | 188 | – | – | – | – | 3 | 79 | 69 | – | – | – |
| Canada Post Corporation | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 150 | 56 | 63 | 114 |
| Other | 98 | 96 | 97 | 239 | 235 | 297 | 226 | 258 | 222 | 46 | 44 | 40 | 39 |
| **Total** | **20,478** | **20,493** | **20,489** | **23,576** | **25,249** | **25,370** | **28,115** | **34,278** | **39,698** | **38,640** | **41,400** | **45,175** | **46,342** |

[1] This corporation is no longer a Crown corporation.

Source: *Public Accounts of Canada.*

| Borrowings from the Consolidated Revenue Fund Corporation | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | ($ millions) | | | | | | |
| Canada Mortgage and Housing Corporation | 8,484 | 8,419 | 8,181 | 8,075 | 7,835 | 7,263 | 6,938 | 6,708 | 6,298 | 6,152 | 5,852 | 5,696 | 5,476 |
| Canada Deposit Insurance Corporation | 1,225 | 1,785 | 3,085 | 3,151 | 2,160 | 1,627 | 855 | 395 | – | – | – | – | – |
| Farm Credit Corporation | 2,432 | 2,491 | 2,420 | 2,488 | 2,524 | 2,310 | 2,507 | 1,877 | 1,041 | 805 | 578 | – | – |
| Other | 934 | 975 | 819 | 415 | 307 | 233 | 204 | 179 | 551 | 77 | 84 | 104 | 38 |
| **Total** | **13,075** | **13,670** | **14,505** | **14,129** | **12,826** | **11,433** | **10,504** | **9,159** | **7,890** | **7,034** | **6,514** | **5,727** | **5,446** |

Note: Figures do not include "allowance for valuation."

Source: Public Works and Government Services Canada data.